School of Medicine Catalog

Vanderbilt University 2018/2019

Containing general information and courses of study for the 2018/2019 session corrected to August 2018
Nashville
Communicating with the School of Medicine

Office of the Dean
Jeffrey R. Balser, M.D., Ph.D.
Dean, Vanderbilt University School of Medicine
D-3300 Medical Center North
Nashville, Tennessee 37232-2104
(615) 936-3030

Office of Health Sciences Education
Bonnie M. Miller, M.D., M.M.H.C.
Senior Associate Dean for Health Sciences Education
430 Eskind Family Biomedical Library and Learning Center*
Nashville, TN 37240
(615) 322-7221

Faculty Affairs
David S. Raford, M.D.
Senior Associate Dean for Faculty Affairs
320 Rudolph A. Light Hall
Nashville, Tennessee 37232-0260
(615) 875-8721

Biomedical Research, Education and Training
Roger Chalkley, D. Phil.
Senior Associate Dean for Biomedical Research, Education and Training
340 Rudolph A. Light Hall
Nashville, Tennessee 37232-0301
(615) 343-4611

Undergraduate Medical Education
William B. Cutrer, M.D., M.Ed.
Associate Dean for Undergraduate Medical Education
429 Eskind Family Biomedical Library and Learning Center*
Nashville, TN 37240
(615) 835-7700

Medical Scientist Training
Christopher S. Williams, M.D., Ph.D.
Associate Dean for Physician-Scientist Education and Training
1030 MRB IV
Nashville, Tennessee 37232
(615) 322-5200

Graduate Medical Education
Donald W. Beady, M.D.
Senior Associate Dean for Graduate Medical Education and Continuing Professional Development
201 Rudolph A. Light Hall
Nashville, Tennessee 37232-0685
(615) 322-6035

Diversity in Medical Education
André L. Churchill, M.D.
Senior Associate Dean for Diversity Affairs
319 Rudolph A. Light Hall
Nashville, Tennessee 37232-0260
(615) 322-7497

Medical Student Affairs
Amy E. Fleming, M.D., M.H.P.E.
Associate Dean for Medical Student Affairs
428 Eskind Family Biomedical Library and Learning Center*
Nashville, TN 37240
(615) 322-5007

Office of Enrollment Services
Admissions
Jennifer S. Kimble, M.Ed.
Director of Admissions
227 Eskind Family Biomedical Library and Learning Center*
Nashville, TN 37240
(615) 322-2145

Scholarships and Financial Aid
Vacant (TBA)
Assistant Director, Student Financial Services
226 Eskind Family Biomedical Library and Learning Center*
Nashville, TN 37240
(615) 322-1792

Student Records
Logan S. Key, M.Ed.
225 Eskind Family Biomedical Library and Learning Center*
Nashville, TN 37240
(615) 322-2145

Center for Experiential Learning and Assessment (CELA)
Arna Banerjee, M.D.
Director
3450 Medical Research Building IV
Nashville, Tennessee 37232-0432
(615) 936-8801

Continuing Medical Education/Maintenance of Certification
Donald E. Moore, Jr., Ph.D.
Educational Director
Office of Continuing Professional Development
201 Rudolph A. Light Hall
Nashville, Tennessee 37232-0685
(615) 322-6035

Education Design and Informatics
W. Anderson Spickard III, M.D.
Assistant Dean for Education Design and Technology
408 Eskind Family Biomedical Library and Learning Center*
Nashville, TN 37240
(615) 875-5724

Alumni Affairs
Ann H. Price, M.D.
Associate Dean for Alumni Affairs
D-8212 Medical Center North
Nashville, Tennessee 37232-2106
(615) 343-6337

Ombudsman
Lynn E. Webb, Ph.D.
Ombudsman for Vanderbilt University School of Medicine
2135 Blakemore Ave
Nashville, Tennessee 37212
(615) 936-7184

*The street address for the Eskind Family Biomedical Library and Learning Center is 2209 Garland Avenue, Nashville, TN 37240. The Campus Mail address is PMB 407712.

Additional information about the Vanderbilt University School of Medicine faculty, staff, and programs may be found on the web at medschool.vanderbilt.edu.
The university reserves the right, through its established procedures, to modify the requirements for admission and graduation and to change other rules, regulations, and provisions, including those stated in this bulletin and other publications, and to refuse admission to any student, or to require the withdrawal of a student if it is determined to be in the interest of the student or the university. All students, full time or part time, who are enrolled in Vanderbilt courses are subject to the same policies.

Policies concerning noncurricular matters and concerning withdrawal for medical or emotional reasons can be found in the Student Handbook, which is on the Vanderbilt website at vanderbilt.edu/student_handbook.

NONDISCRIMINATION STATEMENT
In compliance with federal law, including the provisions of Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendment of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, the ADA Amendments Act of 2008, Executive Order 11246, the Vietnam Era Veterans Readjustment Assistance Act of 1974 as amended by the Jobs for Veterans Act, the Uniformed Services Employment and Reemployment Rights Act, as amended, and the Genetic Information Nondiscrimination Act of 2008, Vanderbilt University does not discriminate against individuals on the basis of their race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability, military service, covered veterans status, or genetic information in its administration of educational policies, programs, or activities; admissions policies; scholarship and loan programs; athletic or other university-administered programs; or employment. In addition, the university does not discriminate against individuals on the basis of their gender expression consistent with the university’s nondiscrimination policy. Requests for information, inquiries, or complaints should be directed to these offices: Faculty and staff—Equal Employment Opportunity, Anita J. Jenious, director, eecinfo@vanderbilt.edu, telephone (615) 343-9336; Students—Title IX and Student Discrimination, Molly Zlock, Title IX coordinator and director, titleixandstudentdiscrimination@vanderbilt.edu, telephone (615) 343-9004, 110 21st Avenue South, Suite 975, Nashville TN 37203; Students—Student Access Services, Tiffany Culver, interim director, disabilityservices@vanderbilt.edu, telephone (615) 343-9727.

Vanderbilt® and the Vanderbilt logos are registered trademarks of The Vanderbilt University. © 2018 Vanderbilt University. All rights reserved.

The text of this catalog is printed on recycled paper with ink made from renewable resources.

This publication is recyclable. Please recycle it.

Produced by Vanderbilt University Marketing Solutions and Vanderbilt Printing Services
Printed in the United States of America
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar</td>
<td>4</td>
</tr>
<tr>
<td>Administration</td>
<td>5</td>
</tr>
<tr>
<td>Vanderbilt University</td>
<td>10</td>
</tr>
<tr>
<td>Life at Vanderbilt</td>
<td>11</td>
</tr>
<tr>
<td>Education at Vanderbilt University School of Medicine</td>
<td>21</td>
</tr>
<tr>
<td>Admission</td>
<td>31</td>
</tr>
<tr>
<td>Academic Programs and Policies for the Doctor of Medicine</td>
<td>40</td>
</tr>
<tr>
<td>Academic Policies for Other School of Medicine Degrees</td>
<td>60</td>
</tr>
<tr>
<td>Honors and Awards</td>
<td>68</td>
</tr>
<tr>
<td>Financial Information</td>
<td>70</td>
</tr>
<tr>
<td>Courses of Study</td>
<td>78</td>
</tr>
<tr>
<td>Faculty</td>
<td>122</td>
</tr>
<tr>
<td>Index</td>
<td>221</td>
</tr>
</tbody>
</table>
FALL SEMESTER 2018

Classes begin for 3rd- and 4th-year M.D. students / Monday 9 July
Classes continue for 2nd-year M.D. students / Monday 2 July
Orientation/Registration for 1st-year M.D. students / Wednesday 18 July–Friday 20 July
Classes begin for 1st-year M.D. students / Monday 23 July
Fall semester begins for VUSM master’s and doctoral programs (other than M.D.) / Wednesday 22 August
Labor Day—No M.D. classes or clinical activities / Monday 3 September
Fall break for VUSM master’s and doctoral programs (other than M.D.) / Thursday 18 October–Sunday 21 October
Fall break for 1st-year medical students / Monday 22 October–Tuesday 23 October
Thanksgiving holiday for VUSM master’s and doctoral programs (other than M.D.) / Saturday 17 November–Sunday 25 November
Thanksgiving holiday for all M.D. students / Thursday 22 November–Sunday 25 November
Fall semester ends for all VUSM master’s and doctoral programs (other than M.D.) / Thursday 6 December
Holiday break for all VUSM master’s and doctoral programs (other than M.D.) / Sunday 16 December–Sunday 6 January, 2019
Fall semester ends for all M.D. students / Friday 21 December
Holiday break for all M.D. students / Saturday 22 December–Sunday 6 January, 2019

SPRING SEMESTER 2019

Classes begin for all M.D. students / Monday 7 January
Spring semester begins for VUSM master’s and doctoral programs (other than M.D.) / Monday 7 January
Martin Luther King Jr. Day—No class or clinical activities / Monday 21 January
Spring break for 2nd-year M.D. students / Saturday 2 March–Sunday 10 March
Spring break for VUSM master’s and doctoral programs (other than M.D.) / Saturday 2 March–Sunday 10 March
Spring break for 1st-year M.D. students / Saturday 27 April–Sunday 5 May
Spring semester ends for VUSM master’s and doctoral programs (other than M.D.) / Monday 22 April
Instruction ends for 4th-year M.D. students / Wednesday 1 May
Commencement / Friday 10 May
Memorial Day—No class or clinical activities / Monday 27 May

SUMMER SESSION 2019

May term begins for VUSM master’s and doctoral programs (other than M.D.) / Monday 6 May
May term ends for VUSM master’s and doctoral programs (other than M.D.) / Friday 31 May
Full summer term begins for VUSM master’s and doctoral programs (other than M.D.) / Tuesday 4 June
Summer break for 1st-year M.D. students (Tentative) / Saturday 27 July–Sunday 25 August
Full summer term ends for VUSM master’s and doctoral programs (other than M.D.) / Friday 9 August
Vanderbilt University Board of Trust

BRUCE R. EVANS, Chairman, Boston, MA
JEFFREY J. ROTHSCCHILD, Vice Chairman, Palo Alto, CA
JON WINKELRIED, Vice Chairman, Hobe Sound, FL
ADOLPHO A. BIRCH III, Secretary, New York, NY
NICHOLAS S. ZEPPOS, Chancellor of the University, Nashville, TN

GREG S. ALLEN
Charlottesville, VA
LEE M. BASS
Fort Worth, TX
W. PERRY BRANDT
Kansas City, MO
SHIRLEY M. COLLADO
Ithaca, NY
JAY C. HOAG
Palo Alto, CA
ANDREW M. HOINE
New York, NY
KITO K. HUGGINS
Brooklyn, NY
JOHN R. INGRAM
Nashville, TN
KATHLEEN E. JUSTICE-MOORE
Palo Alto, CA
ADITYA V. KARHADE
Roxbury Crossing, MA
STEVEN H. MADDEN, SR.
Houston, TX
MARK P. MAYS
San Antonio, TX
W. DOUGLAS PARKER, JR.
Dallas, TX
COURTNEY C. PASTRICK
Bethesda, MD
DAVID W. PATTERSON, M.D.
Great Falls, VA
ROSS PEROT, JR.
Dallas, TX
ROBERT C. SCHIFF, JR., M.D.
Cincinnati, OH
ALEXANDER C. TAYLOR, JR.
Atlanta, GA
NORA WINGFIELD TYSON
Williamsburg, VA
MARK WILF
Livingston, NJ

Emerita/Emeritus Trustees

MARY BETH ADDERLEY
La Jolla, CA
MICHAEL L. AINSLIE
Palm Beach, FL
DARRYL D. BERGER
New Orleans, LA
CAMILLA DIETZ BERGERON
New York, NY
DENNIS C. BOTORFF
Nashville, TN
LEWIS M. BRANSCOMB
La Jolla, CA
THOMAS F. CONE
Nashville, TN
CECIL D. CONLEE
Atlanta, GA
H. RODES HART
Brentwood, TN
JOANNE F. HAYES
Gulf Stream, FL
MARTHA R. INGRAM
Nashville, TN
J. HICKS LANIER
Atlanta, GA
EDWARD A. MALLOY, C.S.C.
Notre Dame, IN
JACKSON W. MOORE
Memphis, TN
KENNETH L. ROBERTS
Nashville, TN
JOE L. ROBY
New York, NY
EUGENE B. SHANKS, JR.
Greenwich, CT
RICHARD H. SINKFIELD
Atlanta, GA
CAL TURNER
Franklin, TN
J. STEPHEN TURNER
Nashville, TN
EUGENE H. VAUGHAN
Houston, TX

DUDLEY BROWN WHITE
Nashville, TN
W. RIDLEY WILLS II
Nashville, TN
J. LAWRENCE WILSON
Bonita Springs, FL
REBECCA WEBB WILSON
Memphis, TN
WILLIAM M. WILSON
Nashville, TN

MARIBETH GERACIOTI, Secretary to the Board of Trust
Vanderbilt University Administration

NICHOLAS S. ZEPPOS, J.D., Chancellor
SUSAN R. WENTE, Ph.D., Provost and Vice Chancellor for Academic Affairs
STEVE ERTEL, B.A., Vice Chancellor for Communications
NATHAN GREEN, B.B.A., Interim Vice Chancellor for Public Affairs
ANDERS W. HALL, M.B.A., Vice Chancellor for Investments and Chief Investment Officer
ERIC C. KOPSTAIN, M.B.A., Vice Chancellor for Administration
JOHN M. LUTZ, A.B., Vice Chancellor for Information Technology
RUBY Z. SHELLAWAY, J.D., Interim General Counsel
TINA L. SMITH, Ed.D., Interim Vice Chancellor for Equity, Diversity, and Inclusion and Interim Chief Diversity Officer
SUSIE S. STALCUP, B.B.A., C.F.P., Vice Chancellor for Development and Alumni Relations
BRETT SWEET, M.B.A., Vice Chancellor for Finance and Chief Financial Officer
DAVID WILLIAMS II, J.D., LL.M., M.B.A., Vice Chancellor for Athletics and University Affairs and Athletics Director

Deans

JEFFREY R. BALSER, M.D., Ph.D., Dean of the School of Medicine
MARK D. BANDAS, Ph.D., Associate Provost and Dean of Students
VANESSA BEASLEY, Ph.D., Associate Provost and Dean of Residential Faculty
CAMILLA PERSSON BENBOW, Ed.D., Dean of Peabody College
DOUGLAS L. CHRISTIANSEN, Ph.D., Vice Provost for University Enrollment Affairs and Dean of Admissions and Financial Aid
PHILIPPE M. FAUCHET, Ph.D., Dean of the School of Engineering
JOHN G. GEER, Ph.D., Dean of the College of Arts and Science
CHRIS GUTHRIE, J.D., Dean of the Law School
M. ERIC JOHNSON, Ph.D., Dean of Owen Graduate School of Management
GREGORY F. MELCHOR-BARZ, Ph.D., Interim Dean of The Martha Rivers Ingram Commons
LINDA D. NORRIS, D.S.N., Dean of the School of Nursing
EMILIE M. TOWNES, Ph.D., Dean of the Divinity School
MARK WAIT, D.M.A., Dean of Blair School of Music
MARK T. WALLACE, Ph.D., Dean of the Graduate School
School of Medicine Administration

JEFFREY R. BALSER, M.D., Ph.D., Dean, School of Medicine
LAWRENCE J. MARINETT, Ph.D., Dean of Basic Sciences
BONNIE M. MILLER, M.D., M.M.H.C., Senior Associate Dean for Health Sciences Education
GORDON R. BERNARD, M.D., Senior Associate Dean for Clinical Research
DONALD W. BRADY, M.D., Senior Associate Dean for Graduate Medical Education and Continuing Professional Development
G. ROGER CHALKLEY, D.Phil., Senior Associate Dean for Biomedical Research, Education, and Training
ANDRE L. CHURCHWELL, M.D., Senior Associate Dean for Diversity Affairs
ROBERT S. DITTUS, M.D., M.P.H., Senior Associate Dean for Population Health Sciences
C. WRIGHT PINSON, M.B.A., M.D., Senior Associate Dean for Clinical Affairs
DAVID S. RAIFORD, M.D., Senior Associate Dean for Faculty Affairs
WILLIAM COOPER, M.D., M.P.H., Associate Dean for Faculty Affairs
WILLIAM B. CUTRER, M.D., M.Ed., Associate Dean for Undergraduate Medical Education
AMY E. FLEMINING, M.D., M.H.P.E., Associate Dean for Medical Student Affairs
KATHLEEN GOULD, Ph.D., Associate Dean for Biomedical Sciences and Director, Office of Graduate Student Support
KATHERINE E. HARTMANN, M.D., Ph.D., Associate Dean for Clinical and Translational Scientist Development
ALYSSA M. HASTY, Ph.D., Associate Dean for Faculty Development (Basic Sciences)
STEVEN G. MERANZE, M.D., Associate Dean for Faculty Affairs
JOHN S. PENN, Ph.D., Associate Dean for Faculty Affairs
ANN H. PRICE, M.D., Associate Dean for Alumni Affairs
CHARLES R. SANDERS, Ph.D., Associate Dean for Research (Basic Sciences)
LINDA J. SEALY, Ph.D., Associate Dean for Diversity, Equity and Inclusion (Basic Sciences)
PAUL J. STEINBERG, JR., M.D., Associate Dean for Clinical Affairs
CHRISTOPHER S. WILLIAMS, M.D., Ph.D., Associate Dean for Physician Research Education; Director, Medical Scientist Training Program
ARNA BANERJEE, M.D., Assistant Dean for Simulation in Medical Education
JOEY V. BARNETT, Ph.D., Assistant Dean and Director, Office for Medical Student Research; Chair, Doctor of Medicine Admission Committee
CHARLENE DEWEY, M.D., M.Ed., Assistant Dean for Educator Development
DONNA E. ROSENSTIEL, L.C.S.W., Assistant Dean for Health Sciences Education
CATHLEEN C. PETTEPHER, Ph.D., Assistant Dean for Medical Student Assessment
W. ANDERSON SPICKARD III, M.D., Assistant Dean for Education Design and Technology
REBECCA R. SWAN, M.D., Assistant Dean for Graduate Medical Education
KIMBERLY N. VINSON, M.D., Assistant Dean for Diversity Affairs
LYNN E. WEBB, Ph.D., Assistant Dean for Faculty Development; Ombudsman, Vanderbilt University School of Medicine
D. CATHERINE FUCHS, M.D., Chair, Doctor of Medicine Admission Committee
TODD A. RICKETTS, Ph.D., Vice Chair of Graduate Studies, Department of Hearing and Speech Sciences
ERIC D. AUSTIN, M.D., M.S.C.I., Director, Master of Science in Clinical Investigation Program
MARTHA SHAW DUDEK, M.S., L.C.G.C., Director, Master of Genetic Counseling Program
JESSE EHRENFIELD, M.D., M.P.H., Director, Education Research; Director, LGBTQ Health
MARY SUE FINO-SZUMSKI, Ph.D., Director of Clinical Education, Hearing and Speech Sciences Programs
MICHAEL J. FOWLER, M.D., Director, Clinical Skills Development
MARIE R. GRIFFIN, M.D., M.P.H., Director, Master of Public Health Program
RAYMOND L. MERNAGH, Ph.D., Director, Master of Laboratory Investigation Program
DONALD E. MOORE, JR., Ph.D., Director, M.D. Curriculum Evaluation
MANUEL A. MORALES-PALIZA, Ph.D, Director, Doctorate in Medical Physics and Master of Science in Medical Physics Programs
JOSH F. PETERSON, M.D., M.P.H., Director, Master of Science in Applied Clinical Informatics Program
REGINA G. RUSSELL, M.Ed., Director, Learning Systems Outcomes
MICHAEL PONS, Administrative Officer, Office of Health Sciences Education
LOGAN KEY, M.Ed., Director, Office of Student Records
JENNIFER KIMBLE, M.Ed., Director, Admissions
LINDSEY MOLONEY, M.S., Administrative Director, Office of Undergraduate Medical Education
SARAH C. WOODALL, Administrative Director, Office for Medical Student Affairs
LOURDES ESTRADA, Ph.D., Associate Director, Academics and Operations, Medical Scientist Training Program
SALLY YORK, M.D., Ph.D., Associate Director for Clinical Education, Medical Scientist Training Program
SHERRY STUART, Assistant Director, Student Financial Services

Executive Faculty

Standing Committees
(The dean is an ex officio member of all standing and special committees.)

Doctor of Medicine Admission Committees
The M.D. Program admission committees have the responsibility of reviewing medical school applications for admission and recommending to the chairs of admission those applicants considered most qualified for admission. Chairs and the Director of Admission oversee and continually review the entire admission process, recruit committee members, schedule and conduct training sessions for the committees, and organize and lead committee meetings.

The following admission sub-committees include faculty from across the Vanderbilt University School of Medicine who review applications in a holistic manner. Committee members’ reviews and analyses are compiled and exchanged over a multi-step process.
Step 1—Screening Admission Committee: This committee includes approximately 20-28 faculty members who screen primary applications to identify the candidates who will receive secondary applications. The screening admission committee also reviews secondary applications to determine which applicants will be considered for interviews.

Step 2—Interview Selection Committee: This committee includes approximately 24-30 faculty members who review and evaluate application materials to determine the applicants to invite for interviews.

Step 3—Executive Admission Committee: This committee includes approximately 18-24 faculty members and 10 current medical students, on rotating appointments, who review and evaluate all application materials, including interview reports, to provide a score that substantiates the determination of which candidates will be offered admission.

Doctor of Medicine Phase Teams
Phase Teams consist of the course directors and major teachers responsible for implementation of the curriculum for each of the phases in medical school, as well as representatives of the Student Curriculum Committee and staff members working with the curriculum. The associate dean for undergraduate medical education and the Undergraduate Medical Education Executive Committee faculty chair coordinate the work of the Phase Teams to support the curricular quality improvement process.

Foundations of Medical Knowledge Team: Neil Osheroff, Chair. All block and longitudinal course directors serve on this committee. Ex officio: William B. Cutrer, Bonnie M. Miller, Amy E. Fleming, and Logan Key.

Foundations of Clinical Care Team: Ed Vasilevskis, Chair. All clerkship directors and longitudinal course directors serve on this committee. Ex officio: William B. Cutrer, Bonnie M. Miller, Amy E. Fleming, and Logan Key.

Immersion Team: Lourdes Estrada, Kendra Parekh, Co-chairs. Members of the Immersion Phase Working Group and Advisory Team, along with Immersion course directors, serve on this committee. Ex officio: William B. Cutrer, Bonnie M. Miller, Amy E. Fleming, and Logan Key.

Doctor of Medicine Student Promotion Committees
Each promotion committee will have the responsibility for making recommendations to the dean and the executive faculty concerning promotion, remedial action, or dismissal as appropriate for each student in the class/phase for which it is responsible.

Immersion Phase

Foundations of Clinical Care Phase

Foundations of Medical Knowledge Phase

Doctor of Medicine Undergraduate Medical Education Committee
The Undergraduate Medical Education Executive Committee (UMECC) is composed of members of the School of Medicine leadership appointed by the dean to include key faculty leaders from multiple departments, the phase team leaders, and leaders of longitudinal elements, led by a faculty chair of the committee, also appointed by the dean. (Details of committee membership are outlined in the UMEC charter.)

Ex officio members include the senior associate dean for health sciences education, the associate dean for undergraduate medical education, the associate dean for medical student affairs, the associate dean for diversity, the assistant dean for assessment, the associate dean for educational informatics and technology, the assistant dean for undergraduate medical education, the director of clinical skills development, and the director of program evaluation. There is also student representation on this committee.

UMECC is advisory to the dean, and, along with the dean, it holds authority for central oversight of the UME curriculum. UMECC meets every other month. Meetings are devoted to course approval/evaluation, program evaluation, thread evaluation, and/or educational policy. The agenda is determined jointly by the faculty chair of the committee and the associate dean for UME.

The committee has the option of convening additional meetings as needed.

The UMEC for the current academic year will be chaired by James Atkinson and will consist of faculty representatives from basic science and clinical departments.

Faculty Appointments and Promotion Committee (FAPC) and Clinical Practice Appointment and Promotion Committee (CPAPC)
These committees, appointed by the dean, are responsible for consideration of faculty promotion in the School of Medicine and for examination of credentials of candidates for appointment to faculty positions.


Medical Innovators Development Program (MIDP) Internal Advisory Council
The MIDP Internal Advisory Council provides strategic planning and program oversight for all aspects of the program. This committee meets once or twice each year.

Alan Bentley, William B. Cutrer, Robert Dittus, Phillipe Fauchet, John Gore, Robert Labadie, Kevin Johnson, Mark Frisse, David Owens, Robert Grajewski, and Larry Van Horn.

Medical Innovators Development Program (MIDP) Leadership Team
The MIDP Leadership Team is appointed annually by the dean to assist in the admission process and provide program oversight and strategic planning. Each applicant for the MIDP is interviewed individually by several members of this team, which serves as the School of Medicine Admission Committee for the MIDP.

Reed Omary, Director; Victoria Morgan, Associate Director; André Churchwell, Melanie Schuele, Matthew Walker III, Michael King, and Trent Rosenblum. A student member is appointed to the leadership team each year.

Medical Scientist Training Program (MSTP) Admission Committee
The MSTP Admission Committee (MAC) is appointed annually by the dean to assist in the admissions process and provide program oversight and strategic planning. Each applicant for the MSTP is interviewed individually by several members of the MAC, which serves as the School of Medicine
Admission Committee for the MSTP. The MAC includes several institutional leaders and senior scientists with responsibility for M.D. and Ph.D. training.


Medical Scientist Training Program (MSTP) Senior Oversight Committee

The MSTP Senior Oversight Committee provides guidance about all aspects of the program. This committee meets once or twice each year and is focused on strategic planning and program oversight.

Christopher S. Williams, Director. Lourdes Estrada, Ambra Pozzi, Danny Winder, Sally York, Associate Directors; Megan A. Williams, Assistant Director. G. Roger Chalkley, Chair. William B. Cutrer, Amy E. Fleming, Cathy Fuchs, Lawrence J. Marnett, and Bonnie M. Miller.

Quantitative and Chemical Biology Executive Committee

The Quantitative and Chemical Biology (QCB) Executive Committee is responsible for evaluating and admitting students to the QCB, which is a doctoral training program designed for those interested in pursuing research at the interface of chemical, physical, and biological sciences. The Executive Committee will review the progress of the first-year graduate students in the program before recommending students to the graduate programs of Biochemistry, Biological Sciences, Cancer Biology, Cell and Developmental Biology, Chemical and Physical Biology, Chemistry, Human Genetics, Mathematics, Microbe-Host Interactions, Molecular Pathology and Immunology, Molecular Physiology and Biophysics, Pharmacology, and Physics. Based on their field of research, students are welcome to pursue doctoral scholarship in the School of Medicine, the College of Arts and Science, and the School of Engineering.

Hassane Mchaourab, Chair. Raymond Blind, Beth Bowman, Alan Brash, Todd Peterson, David Weaver, and Marjia Zanic.

Selected Other Committees Related to Medical Education

Global Health Education Committee

The Global Health Education Committee (GHEC) supports the vision of the School of Medicine and the Vanderbilt University Medical Center to provide an array of global health education and training opportunities for VUSM and VUMC trainees while simultaneously enhancing the capacity of our partners in a collaborative effort to address global health challenges.

Donald Brady, Melissa Carro, Quentin Eichbaum, Natasha Halasa, Doug Heimburger, Julie Lankford, Marie Martin, Bonnie Miller, Doug Morgan, and Melinda New.

Interdisciplinary Graduate Program Executive Committee

The Interdisciplinary Graduate Program Executive Committee is concerned with graduate student affairs and graduate programs in the Medical Center. It is responsible for admitting students to the Interdisciplinary Graduate Program in the Biomedical Sciences; for recommending candidates for fellowships and other funds available for the program; and for reviewing activities and progress of the students in the program and recommending students to the Departments of Biochemistry, Biological Sciences, Cancer Biology, Cell and Developmental Biology, Microbe-Host Interactions, Molecular Pathology and Immunology, Molecular Physiology and Biophysics, and Pharmacology and to the graduate programs in Chemical and Physical Biology, Human Genetics, and Neuroscience for the completion of the Ph.D.


Vanderbilt Institute for Clinical and Translational Research (VICTR) Scientific Review Committee

The VICTR Scientific Review Committee meets regularly to act upon research proposals requesting support for the use of the VICTR resources including the Clinical Research Center, Health Services Research, Biomedical Informatics, Biomedical Statistics, Research Cores, and Research Support Services.

Harvey Murff, Co-chair; Alan Storrow, Co-chair. Donald Alcendor, Eric Austin, Damon Bruce, David Charles, Zhongmao Guo, David Haas, Rizwan Hamid, Darlene Jenkins, Ty Lee Link, Melanie Lutembacher, Josh Peterson, and Ashley Shoemaker. Ex officio: Gordon R. Bernard, Italo Biaggioni, Frank E. Harrell, Kevin Niswender.
When Commodore Cornelius Vanderbilt gave a million dollars to build and endow Vanderbilt University in 1873, he did so with the wish that it “contribute to strengthening the ties which should exist between all sections of our common country.”

A little more than a hundred years later, the Vanderbilt Board of Trust adopted the following mission statement: “We reaffirm our belief in the unique and special contributions that Vanderbilt can make toward meeting the nation’s requirements for scholarly teaching, training, investigation, and service, and we reaffirm our conviction that to fulfill its inherited responsibilities, Vanderbilt must relentlessly pursue a lasting future and seek highest quality in its educational undertakings.”

Today as Vanderbilt pursues its mission, the university more than fulfills the Commodore’s hope. It is one of a few independent universities with both a quality undergraduate program and a full range of graduate and professional programs. It has a strong faculty of more than 2,000 full-time members and a diverse student body of about 10,000. Students from many regions, backgrounds, and disciplines come together for multidisciplinary study and research. To that end, the university is the fortunate recipient of continued support from the Vanderbilt family and other private citizens.

The 333-acre campus is about one and one-half miles from the downtown business district of the city, combining the advantages of an urban location with a peaceful, park-like setting of broad lawns, shaded paths, and quiet plazas.

Off-campus facilities include the Arthur J. Dyer Observatory, situated on a 1,131-foot hill six miles south.

The schools of the university offer the following degrees:

- **College of Arts and Science.** Bachelor of Arts.
- **Blair School of Music.** Bachelor of Music, Bachelor of Musical Arts.
- **Divinity School.** Master of Divinity, Master of Theological Studies.
- **School of Engineering.** Bachelor of Engineering, Bachelor of Science, Master of Engineering.
- **Graduate School.** Master of Arts, Master of Fine Arts, Master of Liberal Arts and Science, Master of Science, Doctor of Philosophy.
- **Law School.** Master of Laws, Doctor of Jurisprudence.
- **School of Medicine.** Master of Education of the Deaf, Master of Genetic Counseling, Master of Laboratory Investigation, Master of Public Health, Master of Science in Applied Clinical Informatics, Master of Science in Clinical Investigation, Master of Science in Medical Physics, Master of Science (Speech-Language Pathology), Doctor of Audiology, Doctor of Medical Physics, Doctor of Medicine.
- **School of Nursing.** Master of Science in Nursing, Doctor of Nursing Practice.
- **Owen Graduate School of Management.** Master of Accountancy, Master of Business Administration, Master of Management in Health Care, Master of Marketing, Master of Science in Finance.
- **Peabody College.** Bachelor of Science, Master of Education, Master of Public Policy, Doctor of Education.

No honorary degrees are conferred.

**Mission, Goals, and Values**

Vanderbilt University is a center for scholarly research, informed and creative teaching, and service to the community and society at large. Vanderbilt will uphold the highest standards and be a leader in the

- quest for new knowledge through scholarship,
- dissemination of knowledge through teaching and outreach,
- creative experimentation of ideas and concepts.

In pursuit of these goals, Vanderbilt values most highly

- intellectual freedom that supports open inquiry,
- equality, compassion, and excellence in all endeavors.

**Accreditation**

Vanderbilt University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award bachelor’s, master’s, professional, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call (404) 679-4500, or visit sacscoc.org for questions about the accreditation of Vanderbilt University.

Please contact the commission only in relation to Vanderbilt’s noncompliance with accreditation requirements. Normal inquiries about admission requirements, educational programs, and financial aid should be directed to the university.
Life at Vanderbilt

VANDERBILT provides a full complement of auxiliary services to meet the personal needs of students, to make life on the campus comfortable and enjoyable, and to provide the proper setting for academic endeavor.

Graduate Student Resources

Graduate Student Council

The Graduate Student Council promotes the general welfare and concerns of the Graduate School student body. This is achieved through creating new programs to provide opportunities for growth and interaction, as well as through communication with the Vanderbilt faculty and administration on behalf of graduate students. The GSC consists of elected representatives from each Graduate School department, committees, and an annually elected executive board. In the recent past, the GSC has helped change policies involving space allocation for teaching assistants, stipend reviews, parking, student health insurance, mental health initiatives, and activities fee allocation. The GSC is also a member of the National Association of Graduate-Professional Students (NAGPS).

In addition to its representative function, the GSC organizes, hosts, and sponsors events and projects during the year, including seminars and panels with individual departments, the Vanderbilt 3 Minute Thesis competition, the Graduate Student Honor Council, community outreach activities, and social opportunities. The GSC also awards travel grants to graduate students who wish to present their research at conferences throughout the year. All Vanderbilt Graduate School students are welcome and encouraged to attend GSC’s monthly meetings and to get involved. For more information, visit studentorgs.vanderbilt.edu/gsc.

Career Development for Graduate School Students

Students with graduate degrees enter careers in a wide variety of sectors: government, business/industry, nonprofits, and academic. The Graduate School Career Development Office supports students’ successful transitions from degree to career, in the form of individual advising, workshops, seminars, and web-based resources. Topics range from creating an effective CV/resume, to interviewing skills, to establishing professional connections: my.vanderbilt.edu/gradcareer. From a student’s first year in a graduate program through their last, these resources will help students explore and prepare for their future careers.

For Ph.D.’s in the biomedical disciplines, the Office of Biomedical Research Education and Training (BRET) offers similar career services medschool.vanderbilt.edu/career-development. Additional resources for particular career interests are available through a campus partnership with the Vanderbilt Career Center.

The Center for Teaching

The mission of the Center for Teaching is to promote university teaching that leads to meaningful student learning. The services of the center are available to all graduate students, including those teaching at Vanderbilt as teaching assistants (TAs) and instructors of record, as well as those who anticipate that teaching will be a part of their future careers.

Fall TA Orientation introduces participants to teaching at Vanderbilt, focusing on the information and skills necessary to take on TA roles in the classroom. Workshops and practice teaching sessions are led by experienced graduate student teaching assistants.

The Certificate in College Teaching has been designed to assist graduate students who wish to develop and refine their teaching skills. The certificate focuses on the research on how people learn and best teaching practices, and supports the university’s pursuit of excellence in teaching and learning. The certificate is ideal for graduate students whose goals are to become more effective educators and who want to prepare for future careers in higher education teaching.

The Blended and Online Learning Design (BOLD) Fellows Program helps graduate students partner with faculty members to design and develop online modules for integration into a course. The teams implement these modules in existing classes and investigate their impact on student learning.

The Certificate in Humanities Teaching & Learning is a program for humanities graduate students that comprises a sequential seminar and practicum in which participants explore humanistic pedagogies and teaching historically underrepresented populations.

The Graduate Teaching Fellows and Teaching Affiliates Program provides graduate students the opportunity to work at the center, facilitating the programs offered to graduate students, consulting with TAs, and collaborating on teaching-related projects.

For more information and other services, please visit the Center for Teaching website at cft.vanderbilt.edu or call (615) 322-7290.

Other Campus Resources

Student Care Network

The Student Care Network is a holistic network of services and resources pertaining to health and wellness available to all Vanderbilt University students. Primary offices include the Office of Student Care Coordination, the University Counseling Center, the Student Health Center, and the Center for Student Wellbeing. Students also have access to a wide range of additional on-campus and community resources through the Student Care Network—from the Vanderbilt Recreation and Wellness Center to the Project Safe Center to a variety of community providers. To facilitate finding resources, students may refer to the Student Care Network website, or contact the Office of Student Care Coordination, vanderbilt.edu/studentcarenetwork.
Office of Student Care Coordination
The Office of Student Care Coordination is committed to supporting undergraduate, graduate, and professional students, and postdoctoral fellows in successfully navigating life events related to academic stress and/or medical, mental health, and/or other personal concerns that may interfere with a student’s ability to achieve their academic and personal goals. This team of “care coordinators” is the central and first point of contact for students to help identify needs and determine the most appropriate resources in Vanderbilt’s Student Care Network and in the Nashville community to address concerns. Student Care Coordinators work collaboratively with students to develop a student success plan, share education about and facilitate connections to appropriate on- and off-campus resources, and provide accountability through supportive follow-up meetings. Our goal is for students to have the right support, in the right place, at the right time. In addition, the Office of Student Care Coordination coordinates support for students returning from medical leaves of absence. Though staff typically have a background in mental health services, it is important to understand that work with a Student Care Coordinator is not counseling or therapy.

Many students face challenges during their educational experiences and each situation is unique. The Office of Student Care Coordination is the first step to determine where to go for the most appropriate support for your needs. Students are encouraged to visit vanderbilt.edu/carecoordination to complete an initial assessment and schedule an appointment to meet with a Student Care Coordinator. Students may also call (615) 343-WELL (9355) or drop in to see a Student Care Coordinator, Monday–Friday, 8 a.m. to 5 p.m. The Office of Student Care Coordination is located in Sarratt Student Center, Suite 100.

University Counseling Center
As a key component of Vanderbilt’s Student Care Network, the UCC provides mental health assessment, support, and treatment for all students enrolled at Vanderbilt, including undergraduate, graduate, and professional students. The UCC also serves postdoctoral scholars appointed by the Office of Postdoctoral Affairs.

Highly skilled and multidisciplinary teams of professionals offer crisis intervention, substance abuse counseling, short-term individual counseling, group therapy, biofeedback, ADHD and learning disorder assessments, and psychiatric assessment and pharmacologic treatment. Treatment plans are tailored to each individual’s unique background and needs. UCC professionals support the university’s mission of fostering inclusive excellence through cultural awareness and competence. In addition to regular hours and evening/weekend crisis response, the UCC offers various “Let’s Talk” locations and affinity groups.

To access UCC services, visit vanderbilt.edu/ucc or the Office of Student Care Coordination’s website at vanderbilt.edu/carecoordination or call the OSCC at (615) 343-WELL (9355). For immediate crisis support or to speak with someone at the UCC after business hours, call the UCC at (615) 322-2571.

Student Health Center
The Student Health Center provides primary care services for students and is staffed by physicians, nurse practitioners, nurses, and lab technicians. The Student Health Center provides services similar to those provided in a private physician’s office or HMO, including routine medical care, specialty care (e.g. nutrition and sports medicine), and some routine lab tests. Most of the services students receive at the Student Health Center are pre-paid, but those services that are not are the responsibility of students to coordinate with their health insurance.

When the university is in session, during fall and spring semesters, the Student Health Center is open Monday through Friday from 8:00 a.m. to 4:30 p.m. and Tuesday early evening. Students should call ahead to schedule an appointment at (615) 322-2427. Students with urgent problems will be seen on a same-day basis. They will be given an appointment that day, or “worked in” on a first-come, first-served basis, if no appointments are available.

Emergency consultation services are available from on-call professionals at (615) 322-2427 when the Student Health Center is closed. For more detailed information on the services available at the Student Health Center and information on other health-related topics, please visit the Student Health Center website at vumc.org/student-health.

Immunization Requirements
The State of Tennessee requires certain immunizations for all students on university campuses. As such, Vanderbilt University will block student registration for those who are not in compliance with the requirements.

The requirements include:
1. Varicella vaccine (two injections) is required for all students who have not had documented chickenpox history. Positive titer results are also accepted.
2. Measles, mumps, and rubella (2 injections) for all incoming students. Positive titer results are also accepted.

The Student Health Center requires all incoming students to complete a Health Questionnaire that includes further information regarding the state-mandated vaccinations, as well as information on other strongly recommended vaccinations.

Information regarding this Health Questionnaire is communicated to students by email after admission to Vanderbilt University. This Health Questionnaire must be returned to the Student Health Center by May 15 with vaccination information.

Students should go to vumc.org/student-health/immunization-requirements-new-students in order to access more information regarding the immunization requirements and information on how to upload their documentation via the secure student health portal.

Student Health Insurance Plan
All students registered in degree programs for 4 or more credit hours, or who are actively enrolled in research courses (including but not limited to dissertation or thesis courses) that are designated by Vanderbilt University as full-time enrollment are required to have health insurance coverage. The university offers a sickness and injury insurance plan that is designed to provide hospital, surgical, and major medical benefits. A brochure explaining the limits, exclusions, and benefits of insurance coverage is available to students online at gallagherstudent.com/vanderbilt or vumc.org/student-health/student-health-insurance.
The annual premium is in addition to tuition and is automatically billed to the student’s account. Coverage extends from August 12 until August 11 of the following year, whether a student remains in school or is away from the university.

A domestic student who does not want to subscribe to the insurance plan offered through the university must complete an online waiver process at gallagherstudent.com/vanderbilt. This process must be completed by August 1 for students enrolling in the fall for annual coverage. Newly enrolled students for the spring term must complete the online waiver process by January 1. The online waiver process indicating comparable coverage must be completed every year by August 1 in order to waive participation in and the premium for the Student Injury and Sickness Insurance Plan.

Family Coverage: Students who want to obtain coverage for their families (spouse, children) may do so at gallagherstudent.com/vanderbilt. Additional premiums are charged for family health insurance coverage and cannot be put on a student’s VU account.

International Student Coverage
International students and their dependents residing in the United States are required to purchase the university’s international student injury and sickness insurance. This insurance is required for part-time as well as full-time students.

Center for Student Wellbeing
The Center for Student Wellbeing seeks to create a campus culture that supports students in cultivating lifelong wellbeing practices. The center offers individual coaching appointments to help students develop and maintain skills that will contribute to personal and academic success, and provides workshops on a variety of topics, including resiliency, time management, alcohol and other drug education, and healthy living. Students may use the center’s meditation room for yoga, meditation, and mindfulness classes, or for self-guided practice. The center also works closely with many campus partners, including the University Counseling Center, the Student Health Center, the Office of Housing and Residential Education, and the academic deans to provide resources and support for students who may be facing personal or academic challenges.

The Center for Student Wellbeing is centrally located on campus at 1211 Stevenson Center Lane, across from the Student Health Center, and is open Monday through Friday, 8:00 a.m. to 5:00 p.m. For more information, please call (615) 322-0480 or visit vanderbilt.edu/healthydores.

Project Safe Center
The Project Safe Center partners with students, faculty, and staff to create a campus culture that rejects sexual violence and serves as a resource for all members of the Vanderbilt community. The Project Safe Center provides support to survivors of intimate partner violence and engages the campus community in prevention of sexual assault, dating violence and domestic violence, and stalking.

Green Dot, a bystander intervention program used by colleges and communities nationwide, an online education module addressing sexual violence, and a variety of programs and presentations on consent, healthy relationships, and violence prevention are available through the Project Safe Center. A 24-hour support hotline answered by Project Safe’s victim resource specialists is available at (615) 322-SAFE (7233).

The Project Safe Center located at 304 West Side Row is open Monday through Friday, 8:00 a.m. to 5:00 p.m. For more information, please call (615) 875-0660 or visit vanderbilt.edu/projectsafe.

Barnes & Noble at Vanderbilt
Barnes & Noble at Vanderbilt, the campus bookstore located at 2525 West End Avenue, offers textbooks (new, used, digital, and rental), computers, supplies, dorm accessories, licensed Vanderbilt merchandise, and best-selling books. The bookstore features extended hours of operation and hosts regular special events. Visitors to the bookstore café can enjoy Starbucks coffees, sandwiches, and desserts while studying. Free customer parking is available in the 2525 garage directly behind the bookstore. For more information, visit vubookstore.com, follow twitter.com/BN_Vanderbilt, find the bookstore on Facebook at facebook.com/VanderbiltBooks, or call (615) 343-2665.

The Commodore Card
The Commodore Card is the Vanderbilt student ID card. It can be used to access debit spending accounts, VU meal plans, and campus buildings such as residence halls, libraries, academic buildings, and the Vanderbilt Recreation and Wellness Center.

ID cards are issued at the Commodore Card Office, 184 Sarratt Student Center, Monday through Friday from 8:30 a.m. to 4:00 p.m. For more information, go to vanderbilt.edu/cardservices.

Eating on Campus
Vanderbilt Campus Dining operates several restaurants, cafes, and markets throughout campus that provide a variety of food. The two largest dining facilities are Rand Dining Center in Rand Hall (connected to Sarratt Student Center) and The Ingram Commons dining hall. Six convenience stores on campus offer grab-and-go meals, snacks, beverages, and groceries. All units accept the Commodore Card and Meal Plans. Graduate student Meal Plans are offered at a discount. For more information, hours, and menus, go to campusdining.vanderbilt.edu.

Housing
To support the housing needs of new and continuing graduate and professional students, the Office of Housing and Residential Education provides a web-based off-campus referral service (offcampushousing.vanderbilt.edu). The referral service lists information about housing accommodations off campus. Cost, furnishings, and conditions vary greatly. For best choices, students seeking off-campus housing should consult the website as early as possible. The website includes listings by landlords looking specifically for Vanderbilt-affiliated tenants. Listings are searchable by cost, distance from campus, number of bedrooms, and other parameters. Students may also complete a profile to assist in finding a roommate. On-campus university housing for graduate or professional students is not available.
Change of Address

Students who change either their local or permanent mailing address are expected to notify the University Registrar immediately. Candidates for degrees who are not in residence should keep the school and the University Registrar informed of current mailing addresses. To change or update addresses, go to registrar.vanderbilt.edu/academic-records/change-of-address.php.

International Student and Scholar Services

International Student and Scholar Services (ISSS) fosters the education and development of nonimmigrant students and scholars to enable them to achieve their academic and professional goals and objectives. ISSS provides advice, counseling, and advocacy regarding immigration, cross-cultural, and personal matters. ISSS supports an environment conducive to international education and intercultural awareness via educational, social, and cross-cultural programs.

Immigration Support and Education

ISSS provides immigration advising and services, including the processing of immigration paperwork, to more than 1,952 international students and scholars. The office works with admission units, schools, and departments to generate documentation needed to bring nonimmigrant students and scholars to the U.S. Further, ISSS keeps abreast of the regulations pertaining to international students and scholars in accordance with the Departments of Homeland Security and State. ISSS advising staff are available to support students’ and scholars’ requests through email, phone calls, daily walk-in hours (1:30–3:30 p.m., Monday–Friday), and private appointments. ISSS puts a strong emphasis on providing employment workshops to inform international students about professional development and employment options while enrolled and after graduation. The office conducts Curricular Practical Training (CPT) workshops every ten days, Optional Practical Training (OPT) workshops every ten days, and Academic Training (AT) workshops every month. ISSS also supports more than 300 alumni international students who have already graduated and are either on OPT or AT work permission.

Sociocultural Adjustment Support

ISSS provides a range of programs and activities throughout the year to address a variety of international student needs and interests. ISSS coordinates semiannual orientation programs for students and ongoing orientations for scholars, who arrive throughout the year. The main orientation for students takes place in the fall of each year and includes more than thirty educational and social programs for newly arriving international students and free airport pickup. Incoming international students are paired with current Vanderbilt students through iLEAD, a mentorship program and student organization. The main purpose of iLEAD is to create linkages between new students and the community and provide educational and social programs to ease transition and increase success at Vanderbilt.

To help promote connection between international students and the greater Nashville community, ISSS coordinates the First Friends program, which matches internationals with domestic students, staff, and community members for friendship and cross-cultural exchange. The monthly World on Wednesday presentations inform, broaden perspectives, and facilitate cross-cultural understanding through discussions led by students, faculty, and staff. International Education Week in the fall provides the campus with additional opportunities to learn about world cultures and to celebrate diversity.

The Writing Studio

The Writing Studio offers graduate students personal writing consultations, fifty-minute interactive discussions about writing. Trained writing consultants can act as sounding boards and guides for the development of arguments and the clarification of ideas. The focus of a consultation varies according to the individual writer and project. In addition to the standard fifty-minute consultations, the Writing Studio also offers dissertation writers the possibility of having extended appointments with the same consultant on an ongoing basis. Fifty-minute appointments can be scheduled online at vanderbilt.edu/writing. Extended appointments must be arranged in advance through writing.studio@vanderbilt.edu and are available on a first-come, first-served basis. Information about other programs for graduate students, like the journal article writing workshop and the annual dissertation writer’s retreat, can also be found at vanderbilt.edu/writing.

Information Technology

Vanderbilt University Information Technology (VUIT) offers voice, video, data, computing, and conferencing services to Vanderbilt students, faculty, and staff. VUIT provides free antivirus downloads and malware prevention in many campus areas. VUIT maintains and supports VUnet, the campuseswide data network that provides access to the internet, and AccessVU, the authentication service that enables Vanderbilt users to securely identify themselves to many services on VUnet. Those services include YES, Your Enrollment Services; Brightspace; and Vmail, the university’s email system. VUIT also partners with Sprint, Verizon, and AT&T to offer discounts for cellular phone service. For discount information see it.vanderbilt.edu/cellphone.

It is important to note that many wireless consumer electronic devices interfere with VUnet, and in worst-case circumstances, could even cause degradation to network service. These devices are prohibited and include, but are not limited to, routers, access points (APs), or AirPorts manufactured by companies such as Apple, Belkin, D-Link, and Linksys. Additionally, settings for smartphone hotspots and wireless connectivity for printers and other devices must be disabled to prevent interference with university wireless APs.

Vanderbilt offers all students low-cost and free-of-charge software, including Microsoft Office and Microsoft Windows. Visit it.vanderbilt.edu/software-store/ for a complete product catalog and more information.

Furthermore, VUIT provides various conferencing and collaboration services for students, including audio and video conferencing via a desktop or a Polycom bridge. Vanderbilt’s blog service offers WordPress Blogs at my.vanderbilt.edu. See it.vanderbilt.edu/services/collaboration for more information.

The Tech Hub is the help desk at Vanderbilt that provides information to students, faculty, and staff about VUnet and VUnet services. Its locations, hours, contacts, and other information can be found at it.vanderbilt.edu/techhub.

For more information on IT services and computing at Vanderbilt, go to it.vanderbilt.edu.
Vanderbilt University Libraries

The Vanderbilt University libraries house nearly five million items and provide access to millions more resources through nine campus libraries: the Central Jean and Alexander Heard Library (A&S); the Peabody Library; the Annette and Irwin Eskind Family Biomedical Library and Learning Center; the Walker Management Library; the Wilson Music Library; the Massey Law Library; the Stevenson Science and Engineering Library; the Divinity Library; and the Special Collections Library. These libraries share an online portal that provides access to an integrated catalog of print and e-resources, as well as information about library services, workshops, programs, exhibitions, research guides, and librarian subject specialists.

Library staff teach students to be information literate and help them develop research skills in an increasingly complex information environment. Students can connect with a librarian in person or ask questions through the library website. Library spaces across campus offer quiet individual study spaces, group study, and instructional rooms, as well as learning commons and cafes. Faculty- and student-curated exhibitions throughout the libraries offer intellectual and creative insights that encourage students to think critically and see their own work in new ways. Students, faculty, and staff come to the library to read in a cozy nook, meet friends for group study, grab a quick meal, or see an exhibition. Even if you are off campus, digital library resources are at your fingertips via your phone, laptop, or computer.

The oldest item in the library dates from ca. 2500 BCE, and new publications are being added every day. Among the collection strengths are: Latin American history, politics, and culture; the History of Medicine Collection; the W. T. Bandy Center for Baudelaire and Modern French Studies; the Southern Literature and Culture Collections; and the Vanderbilt Television News Archive, the world’s most extensive archive of television news covering 1968 to present. The libraries are also involved in digital scholarship, publishing and partnering with faculty on the Revised Common Lectionary, one of the first published web-based resources of scriptural readings for the liturgical year, Ecclesiastical and Secular Sources for Slave Societies, a digital preservation program for endangered documents related to slave societies, the Global Music Archive, a multimedia archive for traditional and popular song, music, and dance of Africa and the Americas, and Syriaca, a digital project for the study of Syriac literature, culture, and history.

Get to know your libraries and your librarians early in your career at Vanderbilt. The libraries have the information you need and can help you transform that information into knowledge, creativity, and success.

Bishop Joseph Johnson Black Cultural Center

As part of the Office of the Dean of Students, the Bishop Joseph Johnson Black Cultural Center provides educational and cultural programming designed to highlight the history and cultural experiences of African Americans. Initially referred to as “the Afro House,” in 1984, the center was named in honor of the first African American student admitted to Vanderbilt University in 1953, Bishop Joseph Johnson (B.D. ’54, Ph.D. ’58). The BCC activities focus on providing student support and development, campus enrichment, and community engagement.

Student Support and Development (Inclusion)

One of the major aims of the BCC is student support and development. To accomplish this objective, the BCC offers student-driven programming, mentoring initiatives, organizational meeting spaces, service opportunities, and leadership skills training. The BCC also serves as a haven for students, with opportunities for informal fellowship with other students of all levels and backgrounds as well as with faculty and staff.

Campus Enrichment (Diversity)

With campus programming focused on Africans and African Americans, the BCC enriches the overall campus environment by promoting intercultural competence. Specifically, the BCC works with numerous campus partners to sponsor lectures, musical performances, art exhibitions, films, and discussions on African and African American history and culture.

Community Engagement (Equity)

Additionally, the BCC engages in community outreach and service by working with various civic and cultural groups in the Nashville area. Through community programs and by supporting students as they tutor and mentor young people from underserved areas in the city, the BCC advocates for social justice and equity on campus and in the larger community.

The BCC is located in the center of campus directly behind Buttrick Hall and across from the main campus mailroom. For more information, please call (615) 322-2524 or visit vanderbilt.edu/bcc.

Margaret Cuninggim Women’s Center

As part of the Office of the Dean of Students, the Margaret Cuninggim Women’s Center leads co-curricular campus initiatives related to women’s and gender issues. The center partners with many departments, programs, and individuals across campus to raise awareness about the ways in which gender shapes and is shaped by our lived experiences. Because its aim is to make the Vanderbilt community more inclusive and equitable, the center encourages all members of the Vanderbilt community to take part in its events and resources.

The Women’s Center celebrates women and their accomplishments and fosters empowerment for people of all identities. The center offers individual support and advocacy around a variety of issues, including gender stereotyping, gender equity, leadership, parenting, body image, disordered eating, pregnancy and reproduction, sexual health, and more. The Women’s Center is open Monday through Friday, 9:00 a.m. to 5:00 p.m. and is located at 316 West Side Row. For more information, please call (615) 322-4843 or visit vanderbilt.edu/womenscenter.

Office of LGBTQI Life

As a part of Vanderbilt’s Office of the Dean of Students, the Lesbian, Gay, Bisexual, Transgender, Queer, and Intersex (LGBTQI) Life office is a welcoming space for individuals of all identities and a resource for information and support about gender and sexuality. LGBTQI Life serves the entire Vanderbilt community through education, research, programming, support, and social events. The office also serves as a comfortable study and socializing space, as well as a connection point to the greater Nashville LGBTQI community. In addition,
Office of the University Chaplain and Religious Life

The Office of the University Chaplain and Religious Life provides opportunities to explore and practice religion, faith, and spirituality and to more deeply understand one’s personal values and social responsibility via educational programming, encounters with various faith perspectives, and engagement with religious and spiritual communities. The office welcomes and serves all students, faculty, and staff and provides an intellectual home and ethical resource for anyone in the Vanderbilt community seeking to clarify, explore, and deepen understanding of their lives and/or faith.

Recognizing the importance of exploring one’s faith in community, the office facilitates opportunities for individuals of a shared faith to worship/practice their particular religious tradition. Whether guided by one of our affiliated chaplains or a student-run religious organization, these groups foster a sense of community and common values. For a complete listing of campus religious groups, resources, services, and programming opportunities, visit vanderbilt.edu/religiouslife.

Schulman Center for Jewish Life

The 10,000-square-foot Ben Schulman Center for Jewish Life is the home of Vanderbilt Hillel. The goal of the center is to provide a welcoming community for Jewish students at Vanderbilt and to further religious learning, cultural awareness, and social engagement. Vanderbilt Hillel is committed to enriching lives and enhancing Jewish identity. It provides a home away from home, where Jews of all denominations come together, united by a shared purpose. The Schulman Center is also home to Grin’s Cafe, Nashville’s only kosher and vegetarian restaurant. For further information about the Schulman Center, please call (615) 322-8376 or email hillel@vanderbilt.edu.

Vanderbilt Child and Family Center

The Vanderbilt Child and Family Center supports the health and productivity of the Vanderbilt community by providing resource and referral services and quality early childhood education and care to the children of faculty, staff, and students. The center’s website at vanderbilt.edu/child-family-center provides information concerning child care, elder care, summer camps, tutoring services, and school-age child care. Care.com and the Vanderbilt Sitter Service provide back-up care options for dependents of all ages and evening, night, and weekend care.

The Child Care Center serves children ages six weeks through five years. Applications for the waiting list may be downloaded from the website. The Family Center offers a monthly luncheon series called “Boomers, Elders, and More” and a caregiver support group.

Nondiscrimination, Anti-Harassment, and Anti-Retaliation

The Title IX and Student Discrimination Office (vanderbilt.edu/title-ix) and/or the Equal Employment Opportunity Office (vanderbilt.edu/ceo) investigate allegations of prohibited discrimination, harassment, and retaliation involving members of the Vanderbilt community. This includes allegations of sexual misconduct and other forms of power-based personal violence. Vanderbilt’s Title IX coordinator is Molly Zlock, director of Title IX and Student Discrimination.

If you believe that a member of the Vanderbilt community has engaged in prohibited discrimination, harassment, or retaliation, please contact the Title IX and Student Discrimination Office and/or the Equal Employment Opportunity Office. If the offense is criminal in nature, you may file a report with Vanderbilt University Police Department.

The Title IX and Student Discrimination Office also facilitates interim accommodations for students impacted by sexual misconduct and power-based personal violence. Some examples of interim accommodations include stay-away orders, adjusted course schedules, and housing changes. Specific concerns pertaining to prohibited discrimination, harassment, or retaliation, including allegations of sexual misconduct and other forms of power-based personal violence, should be directed to the Title IX and Student Discrimination Office at (615) 343-9004.
Equity, Diversity, and Inclusion

The Office for Equity, Diversity, and Inclusion is responsible for advocating for institutional change, working with university stakeholders to set goals and institutionalize accountability, and ensuring that equity, diversity, and inclusion efforts are coordinated throughout Vanderbilt University for students, faculty, and staff. The office provides unconscious bias education, diversity education, campus conversations, and centralized communication and promotion of diverse news and events. Its mission is to be intentional about and account-able for the advancement of equity, diversity, and inclusion in institutional programs for the entire Vanderbilt University community. Visit vanderbilt.edu/equity-diversity-inclusion for more information.

University Courses

By tackling pressing real-world problems and addressing big questions, University Courses educate the whole student and promote lifelong learning. The courses leverage the natural synergies across Vanderbilt’s ten schools and colleges, giving students the opportunity to reach beyond their area of study and interact with faculty at the intersection of disciplines. Each course promotes transinstitutional learning while provid-ing opportunities to embrace diverse perspectives. For more information, visit vu.edu/university-courses.

Official University Communications

Certain federal statutes require that information be delivered to each student. Vanderbilt delivers much of this information via email. Official electronic notifications, including those required by statute, those required by university policy, and instructions from university officials, will be sent to students’ Vanderbilt email addresses: user.name@vanderbilt.edu. Students are required to be familiar with the contents of official university communications, and to respond to instructions and other official correspondence requiring a response. Some messages will include links to the YES Communications Tool, which is a secure channel for official communication of a confidential nature. The university makes every effort to avoid inundating students with nonessential email (often called “spam”) and maintains separate lists from which students may unsubscribe for announcements of general interest.

Prior Degrees

It is the policy of Vanderbilt University to verify prior educational credentials for all admitted students who intend to matriculate. All matriculated students must provide official copies of transcripts and any other required supporting documentation to Vanderbilt University as part of the prior degree verification process. The Office of the University Registrar will review transcripts and other supporting documentation for authenticity and to confirm degrees earned prior to matriculation at Vanderbilt. Offers of admission are contingent on a student’s providing the required documentation. Students who are not able to provide evidence of prior degrees will not be permitted to register for subsequent terms and may be subject to dismissal from the university.

Vanderbilt University Police Department

The Vanderbilt University Police Department, (615) 322-2745, is a professional law enforcement agency dedicated to the protection and security of Vanderbilt University and its diverse community (police.vanderbilt.edu).

The Vanderbilt University Police Department comes under the charge of the Office of the Vice Chancellor for Administration. As one of Tennessee’s larger law enforcement agen-cies, the Vanderbilt University Police Department provides comprehensive law enforcement and security services to all components of Vanderbilt University including the academic campus, Vanderbilt University Medical Center, Vanderbilt Health at One Hundred Oaks, and a variety of university-owned facilities throughout the Davidson County area.

The Police Department includes a staff of more than one hundred people, organized into three divisions under the Office of the Associate Vice Chancellor and Chief of Police: Operations Division (Main Campus, Medical Center, and 100 Oaks Precincts), Administrative Division, and Auxiliary Services Division. All of Vanderbilt’s commissioned police officers have completed officer training at a state-certified police academy and are required to complete on-the-job train-ing as well as attend annual in-service training. Vanderbilt police officers hold Special Police Commissions and have the same authority as that of a municipal law enforcement officer, while on property owned by Vanderbilt, on adjacent public streets and sidewalks, and in nearby neighborhoods. When a Vanderbilt student is involved in an off-campus offense, police officers may assist with the investigation in cooperation with local, state, or federal law enforcement. The department also employs non-academy-trained officers called community service officers (commonly referred to as CSOs) who lend assistance 24/7 to the Vanderbilt community through services that include providing walking escorts, providing jump starts, and unlocking cars. For non-emergency assistance from a community service officer, dial (615) 322-2745 (2-2745 from an on-campus extension).

The Vanderbilt University Police Department provides several services and programs to members of the Vanderbilt community:

Vandy Vans—The Vanderbilt University Police Department administers the Vandy Vans escort system at Vanderbilt University. The Vandy Vans escort system provides vehicular escorts to designated locations on campus. The service consists of vans that operate from 6:00 p.m. to 3:30 a.m. GPS technology allows students to track Vandy Vans on their route via computer or mobile phone using the Safe VU app, setting up text message alerts to let them know when a van will be arriving at their stop. Please visit police.vanderbilt.edu/services/safevu.php to download the app.

Stop locations were chosen based on location, the accessibility of a secure waiting area, and student input. Signs, freestanding or located on existing structures, identify each stop. A walking escort can be requested to walk a student from his/her stop to the final destination. A van is also accessible to students with mobility impairments. For complete information about the Vandy Vans service, including routes, stops, and times, please visit vandyvans.com or call (615) 322-2554.

As a supplement to the Vandy Vans van service, walking escorts are available for students walking to and from any location on campus during nighttime hours. Walking escorts are provided by VUPD officers. The telephone number to call for a walking escort is (615) 421-8888, or 1-888 from a campus
phone, after which, a representative from VUPD will be dispatched to the caller’s location, or to a designated meeting point to accompany the caller to his or her destination.

Emergency Phones—Emergency telephones (Blue Light Phones) are located throughout the university campus, Medical Center, and 100 Oaks.

Each phone has an emergency button that when pressed automatically dials the VUPD Communications Center. An open line on any emergency phone will activate a priority response from an officer. An officer will be sent to check on the user of the phone, even if nothing is communicated to the dispatcher. Cooperation is essential to help us maintain the integrity of the emergency phone system. These phones should be used only for actual or perceived emergency situations.

An emergency response can also be activated by dialing 911 from any campus phone. Cellphone users can dial (615) 421-1911 to summon an emergency response on campus. Cellphone users should dial 911 for off-campus emergencies. Callers should be prepared to state the location from which they are calling.

Security Notices—In compliance with the U.S. Department of Higher Education and the Jeanne Clery Act, Security Notices are issued to provide timely warning information concerning a potentially dangerous situation on or near Vanderbilt University. This information is provided to empower our students and employees with the information necessary to make decisions or take appropriate actions concerning their own personal safety. Security Notices are distributed throughout Vanderbilt to make community members aware of significant crimes that occur at the university. They are distributed through Vanderbilt email lists and through the department’s webpage, police.vanderbilt.edu/crimeinfo/securitynotices.php.

Educational and Assistance Programs—The Crime Prevention Unit of Vanderbilt University Police Department offers programs addressing issues such as sexual assault, domestic violence, workplace violence, personal safety, RAD (Rape Aggression Defense) classes, and victim assistance. VUPD provides additional services including property registration (for bikes, laptops, etc.), lost and found, weapons safekeeping, University Police Department, 111 28th Avenue South, Nashville, Tennessee 37212. Information is also available at police.vanderbilt.edu/services/eduprograms.php.

Additional information on security measures and crime statistics for Vanderbilt is available from the Vanderbilt University Police Department, 111 28th Avenue South, Nashville, Tennessee 37212. Information is also available at police.vanderbilt.edu.

Annual Security Report—The Vanderbilt University Annual Security Report is published each year to provide you with information on security-related services offered by the university and campus crime statistics in compliance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act and the Tennessee College and University Security Information Act.

This booklet is prepared with information provided by the Nashville Metropolitan Police Department, the Department of Student Athletics, Office of the Dean of Students, the Office of Housing and Residential Education, and the Vanderbilt University Police Department. It summarizes university programs, policies, and procedures designed to enhance personal safety for everyone at Vanderbilt.

A copy of this report may be obtained by writing or calling the Vanderbilt University Police Department, 111 28th Avenue South, Nashville, Tennessee 37212 or by telephone at (615) 875-9157. A PDF copy of this report may also be obtained on the website at police.vanderbilt.edu/crimeinfo/index.php.

Obtaining Information About the University

Notice to current and prospective students: In compliance with applicable state and federal law, the following information about Vanderbilt University is available:

Institutional information about Vanderbilt University, including accreditation, academic programs, faculty, tuition, and other costs, is available in the catalogs of the colleges and schools on the Vanderbilt University website at vanderbilt.edu/catalogs.

Information about financial aid for students at Vanderbilt University, including federal and other forms of financial aid for students, is available from the Office of Student Financial Aid and Scholarships on the Vanderbilt University website at vanderbilt.edu/financialaid. The Office of Student Financial Aid and Scholarships is located at 2300 West End Avenue, Nashville, Tennessee 37240-7710, (615) 322-3591 or (800) 288-0204.

Information about graduation rates for students at Vanderbilt University is available on the Vanderbilt University website at virg.vanderbilt.edu. Select “Factbook,” then “Student,” then “Retention/Graduation Rates.” Paper copies of information about graduation rates may be obtained by writing the Office of the University Registrar, Vanderbilt University, PMB 407701, 110 21st Avenue South, Suite 110, Nashville, Tennessee 37240-7701 or by calling (615) 322-7701.

The Vanderbilt University Annual Security Report on university-wide security and safety, including related policies, procedures, and crime statistics, is available from the Vanderbilt University Police Department on the university website at police.vanderbilt.edu/annual-security-report.pdf. A paper copy of the report may be obtained by writing the Vanderbilt University Police Department, 2800 Vanderbilt Place, Nashville, Tennessee 37212 or by calling (615) 343-9750. For more information, see “Vanderbilt University Police Department” in the following section of this catalog.

A copy of the annual Equity in Athletics Disclosure Act Report on the Vanderbilt University athletic program participation rates and financial support data may be obtained by writing the Vanderbilt University Office of Athletic Compliance, 2601 Jess Neely Drive, P.O. Box 120158, Nashville, Tennessee 37212 or by calling (615) 322-7992.

Information about your rights with respect to the privacy of your educational records under the Family Educational Rights and Privacy Act is available from the Office of the University Registrar on the Vanderbilt University website at registrar.vanderbilt.edu/ferpa. Paper copies of this information about educational records may be obtained by writing the Office of the University Registrar, Vanderbilt University, PMB 407701, 110 21st Avenue South, Suite 110, Nashville, Tennessee 37240-7701 or by calling (615) 322-7701. For more information, see “Confidentiality of Student Records” below.
Student Records (Family Educational Rights and Privacy Act)

Vanderbilt University is subject to the provisions of federal law known as the Family Educational Rights and Privacy Act (also referred to as FERPA). This act affords matriculated students certain rights with respect to their educational records. These rights include:

1. The right to inspect and review their education records within 45 days of the day the university receives a request for access. Students should submit to the University Registrar written requests that identify the record(s) they wish to inspect. The University Registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the University Registrar does not maintain the records, the student will be directed to the university official to whom the request should be addressed.

2. The right to request the amendment of any part of their education records that a student believes is inaccurate or misleading. Students who wish to request an amendment to their educational record should write the university official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the university decides not to amend the record as requested by the student, the student will be notified of the decision and advised of his or her right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student’s education records to third parties, except in situations that FERPA allows disclosure without the student’s consent. These exceptions include:
   - Disclosure to school officials with legitimate educational interests. A “school official” is a person employed by the university in an administrative, supervisory, academic or research, or support-staff position (including University law enforcement personnel and health staff); contractors, consultants, and other outside service providers with whom the university has contracted; a member of the Board of Trust; or a student serving on an official University committee, such as the Honor Council, Student Conduct Council, or a grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.
   - Disclosure to parents if the student is a dependent for tax purposes.
   - Disclosure to appropriate individuals (e.g., parents/guardians, spouses, housing staff, health care personnel, police, etc.) where disclosure is in connection with a health or safety emergency and knowledge of such information is necessary to protect the health or safety of the student or other individuals.
   - Disclosure to a parent or legal guardian of a student, information regarding the student’s violation of any federal, state, or local law, or of any rule or policy of the institution, governing the use or possession of alcohol or a controlled substance if the university has determined that the student has committed a disciplinary violation with respect to the use or possession and the student is under the age of 21 at the time of the disclosure to the parent/guardian.

FERPA provides the university the ability to designate certain student information as “directory information.” Directory information may be made available to any person without the student’s consent unless the student gives notice as provided for, below. Vanderbilt has designated the following as directory information: the student’s name, address, telephone number, email address, student ID photos, major field of study, school, classification, participation in officially recognized activities and sports, weights and heights of members of athletic teams, dates of attendance, degrees and awards received, the most recent previous educational agency or institution attended by the student, and other information that would not generally be considered harmful or an invasion of privacy if disclosed. Any student who does not wish disclosure of directory information should notify the University Registrar in writing. No element of directory information as defined above is released for students who request nondisclosure except as required by statute.

The request for nondisclosure does not apply to class rosters in online class management applications, or to residential rosters—or rosters of groups a student may join voluntarily—in online, co-curricular engagement applications, or rosters of other information on the websites of student organizations that a student may join. Neither class rosters in online class management applications, nor residential rosters in online co-curricular engagement applications, are available to the public.

As of January 3, 2012, the U.S. Department of Education’s FERPA regulations expand the circumstances under which students’ education records and personally identifiable information (PII) contained in such records—including Social Security Numbers, grades, or other private information—may be accessed without consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities (“Federal and State Authorities”) may allow access to student records and PII without consent to any third party designated by a Federal or State Authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is “principally engaged in the provision of education,” such as early childhood education and job training, as well as any program that is administered by an education agency or institution.

Second, Federal and State Authorities may allow access to education records and PII without consent, to researchers performing certain types of studies, in certain cases even when the university objects to or does not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the third parties that they authorize to receive PII, but the Authorities need not maintain direct control over the third parties.

In addition, in connection with Statewide Longitudinal Data Systems, State Authorities may collect, compile, permanently retain, and share without student consent, PII from education records, and may track student participation in education and other programs by linking such PII to other personal information that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

If a student believes the university has failed to comply with FERPA, he or she may file a complaint using the Student Complaint and Grievance Procedures as outlined in the Student Handbook. If dissatisfied with the outcome of this procedure, students may file a written complaint with the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue SW, Washington, DC 20202-5920.

Questions about the application of the provisions of the Family Educational Rights and Privacy Act should be directed to the University Registrar or to the Office of General Counsel.

Vanderbilt Directory

Individual listings in the online People Finder Directory consist of the student’s full name, Vanderbilt email address, and campus mailing address (if available). Students may elect to add additional contact information to their listings,
including school, academic classification, local phone number, local address, permanent address, cellphone, pager, and fax numbers. Student listings in the People Finder Directory are available to the Vanderbilt community via logon ID and e-password. Students may choose to make their online People Finder listings available to the general public (i.e., viewable by anyone with access to the internet), or to block individual directory items. Students who have placed a directory hold with the University Registrar will not be listed in the online directory.

Directory information should be kept current. Students may report address changes, emergency contact information, and missing person contact information via the web by logging in to YES (Your Enrollment Services) https://yes.vanderbilt.edu and clicking on the Personal Information link.

Extracurricular Activities

Student Centers

A variety of facilities, programs, and activities are provided in five separate student center locations—Alumni Hall, The Commons Center, Kissam Center, Sarratt Student Center|Rand Hall, and the Student Life Center.

Sarratt Student Center|Rand Hall is the main student center hub, housing a 300-seat cinema, art gallery, art studios, multicultural space, rehearsal rooms, large lounge spaces, large and small meeting spaces, and a courtyard. The facility is also home to Vanderbilt Student Communications, radio station, TV station, Local Java, and the Pub at Overcup Oak restaurant. Rand Hall houses the Rand Dining Center, campus store, student-operated businesses, the Anchor (student organization space), a multipurpose venue, meeting and seminar rooms, plus large, open lounge space. Some of the offices located in Sarratt Student Center|Rand Hall include the Dean of Students, Greek Life, Leadership, the Office of Active Citizenship and Service, Inclusion Initiatives and Cultural Competence, and Transition Programs. Also included in this facility is a United States Postal Service office.

The Vanderbilt Student Life Center is the university’s community keystone. It is both the fulfillment of students’ vision to have a large social space on campus and a wonderful complement to Sarratt Student Center|Rand Hall. The Student Life Center has more than 18,000 square feet of event and meeting space, including the 9,000-square-foot Commodore Ballroom, which is one of the most popular spaces to have events on campus. The center is also home to the Career Center, International Student and Scholar Services, Commencement and Special Events, Global Education Office, and Global Support Services.

The Commons Center is the community crossroads of The Ingram Commons living and learning community. It has it all: the Dining Hall and great food; a living room with a concert-grade grand piano, and the occasional live musical performance; a small rec room with cardio equipment, free weights, and weight machines; meeting and study rooms; and academic support services like the Writing Studio, the Career Center, and the CASPAR premajor advising center. The third floor of The Commons Center is the home of the Department of Political Science.

Alumni Hall was the original student center on campus when the building opened in 1925. Re-opened in fall 2013 after a yearlong renovation that transformed every space in the facility, Alumni Hall has returned to its role as a student center after serving other purposes over the years. In the renovated Alumni Hall, students have access to an exercise room as well as several new meeting and event spaces. Two departments call Alumni Hall home, the Vanderbilt Institute for Digital Learning and the Vanderbilt Graduate School.

Opened in fall 2014, Kissam Center is the fifth student center, and is part of the Warren College and Moore College residential living-learning communities. Kissam Center is home to meeting and event spaces as well as the Kissam Market and Kissam Kitchen.

Recreation and Sports

Physical education is not required for students, but almost two-thirds of Vanderbilt University students participate in club sports, intramurals, activity classes, or other programs offered at the Vanderbilt Recreation and Wellness Center (VRWC). The large variety of programs available for meeting students’ diverse interests include: thirty-two club sports teams; forty intramural sports (softball, flag football, basketball, table tennis, and soccer); an aquatics program offering swim lessons for all ages and abilities. Red Cross lifeguarding and CPR classes are also available. If being outside is more your style, you can choose from one of more than twenty adventure trips offered each semester or create your own adventure trip with tips and gear from the Outdoor Recreation staff. There are more than eighty group fitness classes a week and a variety of wellness offerings from “learn to box” to healthy eating through Vandy Cooks in the demonstration kitchen, Personalized Nutrition Coaching, and Nutrition Minute grab-and-go information on a variety of nutrition topics.

The VRWC is a 289,000-square-foot facility that houses a 25-yard, 15-lane swimming pool; four courts for basketball, volleyball, and badminton; five racquetball and two squash courts; a four-lane bowling alley; five group fitness classrooms, more than 14,000 square feet of weight/fitness room space; rock-climbing wall; mat room; seven multipurpose rooms; locker rooms; and a 120-yard turf field surrounded by a 300-meter track in the indoor field house. VRWC’s exterior spaces include a sand volleyball court and more than seven acres of field space including three natural grass fields and one turf field.

All students pay a mandatory recreation fee which supports the facilities, fields, and programs (see the chapter on Financial Information). Spouses must also pay a fee to use the facilities.

For additional information, please visit vanderbilt.edu/recreationandwellnesscenter.
The Vanderbilt University School of Medicine administers degree and graduate certificate programs that provide students with the knowledge, skills, and attitudes they will need to practice safe, effective, ethical, evidence-based, and patient-centered health care in the twenty-first century, and to contribute to the knowledge base supporting it.

Mission of the School
The mission of Vanderbilt University School of Medicine is to improve human health. To achieve this goal, we will:

- Prepare physicians, scientists, and educators for positions of worldwide leadership;
- Discover and disseminate new knowledge that advances understanding of health and disease;
- Provide compassionate, personalized patient care of the highest quality in service to our local, national, and global communities;
- Embrace a culture of lifelong learning, innovation, and continuous improvement;
- Create a diverse and broadly inclusive community of faculty, staff, and students that enriches our learning environment and ensures excellence in research and patient care;
- Nurture and protect Vanderbilt’s unique legacy of cooperation, collegiality, and mutual respect;
- Foster the personal and professional growth of all members of the Vanderbilt community, as we continuously strive to realize full potential.

The school’s mission includes the education of physicians at all levels of their professional experience: medical school; postgraduate education, including basic science and clinical training; and continuing education and professional development for the practicing physician. In addition several master’s level and two additional doctoral degrees in health care professions are offered.

Faculty members teach the practice of exemplary patient care at all levels; model programs of health care delivery, at primary, secondary, and tertiary levels; and fulfill the school’s responsibility for community service.

In addition to teaching, members of the medical school faculty have a complementary responsibility to generate new knowledge through research. At Vanderbilt, research encompasses basic scientific questions, issues in clinical care, questions related to the health care system, and scholarship in the medical education process itself. Vanderbilt is recognized as one of the leaders in research among medical schools in the United States.

History of the School
The first diplomas issued by Vanderbilt University were to sixty-one doctors of medicine in February of 1875, thanks to an arrangement that recognized the University of Nashville’s medical school as serving both institutions. Thus, Vanderbilt embraced a fully-organized and functioning medical school even before its own campus was ready for classes in October of that year.

The arrangement continued for twenty more years, until its own campus was ready for classes in October of that year. After reorganization under the Vanderbilt Board in 1895, admission requirements were raised, the course was lengthened, and the system of instruction was changed to include laboratory work in the basic sciences.

The famous report of Abraham Flexner, published by the Carnegie Foundation in 1910 and afterward credited with revolutionizing medical education in America, singled out Vanderbilt as “the institution to which the responsibility for medical education in Tennessee should just now be left.” Large grants from Andrew Carnegie and his foundation, and from the Rockefeller-financed General Education Board, enabled Vanderbilt to carry out the recommendations of the Flexner Report. (These two philanthropies, with the addition of the Ford Foundation in recent years, have contributed altogether more than $20,000,000 to the School of Medicine since 1911.) The reorganized school drew upon the best-trained scientists and teachers in the nation for its faculty. The full benefits of reorganization were realized in 1925 when the school moved from the old South Campus across town to the main campus, thus integrating instruction in the medical sciences with the rest of the university. The school’s new quarters were called “the best arranged combination school and hospital to be found in the United States.”

In 1977, the School of Medicine moved to the newly completed Rudolph A. Light Hall, which served as the home for School of Medicine educational and administrative activities for 41 years. The seven-story structure, with its 209,000 square feet of space, offered the latest in laboratory equipment, audiovisual, and multi-purpose classroom space. Thousands of VUSM students, faculty and staff have considered Light Hall the home of the School of Medicine, given that it has served as such for the longest single period of the school’s history.


Until April 2016, Vanderbilt University owned and operated several hospitals and clinics collectively known as Vanderbilt University Medical Center, including Vanderbilt University Hospital, Vanderbilt Psychiatric Hospital, and Monroe Carell Jr. Children’s Hospital at Vanderbilt, and their associated clinics. Effective April 30, 2016, Vanderbilt University conveyed the clinical assets used in the operation of Vanderbilt University Medical Center to a newly formed, not-for-profit, tax-exempt corporation, which is similarly named Vanderbilt University Medical Center. Vanderbilt University Medical Center now operates independently of Vanderbilt University. It is clinically and academically affiliated with Vanderbilt University.
In summer 2018, the primary location for Vanderbilt University School of Medicine administrative offices—as well as the classrooms, student lounge, and first-year student lockers for the M.D. program—moved from Light Hall to the Annette and Irwin Eskind Family Biomedical Library and Learning Center (EBL). This new home for the School of Medicine, occupying the second, third, and fourth floors of the EBL, provides a state-of-the-art learning environment, with versatile physical spaces and innovative technology, comfortable, modern gathering spaces for both formal and informal student activities, and a bright, airy working environment for School of Medicine faculty and staff. At the same time, Light Hall remains an important venue for learning and co-curricular activities for multiple VUSM degree and certificate programs.

School of Medicine Program Accreditations

Doctor of Medicine—Liaison Committee on Medical Education

LCME Secretariat (AMA)
American Medical Association
330 North Wabash Avenue
Suite 39300
Chicago, IL 60611-5885
Phone: 312-464-4933
LCME.org

LCME Secretariat (AAMC)
Association of American Medical Colleges
655 K Street NW
Suite 100
Washington, DC 20001-2399
Phone: 202-828-0596
LCME.org

Master of Public Health—Council on Education for Public Health

CEPH
1010 Wayne Avenue, Suite 220
Silver Spring, MD 20910
Phone: 202-789-1050
Fax: 202-789-1895
CEPH.org

Doctor of Audiology and Master of Science in Speech-Language Pathology—Council on Academic Accreditation (CAA) in Audiology and Speech-Language Pathology

American Speech-Language-Hearing Association (ASHA)
220 Research Boulevard, #310
Rockville, MD 20850
Phone 800-498-2071
caa.asha.org

Doctor of Medical Physics and Master of Science in Medical Physics—Committee on Accreditation of Medical Physics Education Programs

CAMPEP, Inc.
1631 Prince Street
Alexandria, VA 22314
Phone: 571-298-1239
Fax: 571-298-1301
campep_admin@campep.org
campep.org

Master of Genetic Counseling Program—Accreditation Council for Genetic Counseling

The Vanderbilt University Master of Genetic Counseling program has achieved Candidacy for accreditation by the Accreditation Council for Genetic Counseling (ACGC). Achieving Candidate status demonstrates progress towards accreditation. The MGC is currently under review by the ACGC for New Program status. Updates on the status of Vanderbilt accreditation by the ACGC may be found on the ACGC website at gceducation.org and on the VUSM website, at medschool.vanderbilt.edu/mgc.

Vanderbilt University Student Handbook

In addition to the policies in this School of Medicine Catalog, the university’s Student Handbook applies to students in the School of Medicine. The Student Handbook may be found at vanderbilt.edu/student_handbook, and covers university policies and regulations, student conduct, alcohol and controlled substances, student engagement, and sexual misconduct and intimate partner violence, among other topics.
The Vanderbilt University Statement of the Honor Code

Vanderbilt University students pursue all academic endeavors with integrity. They conduct themselves honorably, professionally, and respectfully in all realms of their studies in order to promote and secure an atmosphere of dignity and trust. The keystone of our honor system is self-regulation, which requires cooperation and support from each member of the university community.

From the Students of Vanderbilt University School of Medicine: The School of Medicine Honor System

The Honor System at Vanderbilt University School of Medicine is conducted by students for the benefit of students, faculty, staff, and patients. The Honor System, as delineated by the Honor Code, requires students to conduct themselves with honor in all aspects of their lives. By demanding great responsibility, the Honor System fosters an environment of freedom and trust that benefits the entire Medical School. In signing this statement upon enrollment, each student agrees to participate in the Honor System and abide by its code.

As representatives of the Vanderbilt University School of Medicine and the medical professions, students pledge to conduct themselves with honor and integrity at all times. The Promotion Committees and the Honor Council serve to protect the environment of trust created by this Honor System. The Promotion Committees periodically evaluate each student’s performance with special attention to work and conduct appropriate for professional practice. The Honor Council serves to educate members of the student body about their responsibilities as outlined in the written code; to conduct investigations and hearings regarding reported violations of the code; and to decide the nature of penalties deemed appropriate for such violations. Decisions reached by the Honor Council do not preclude the discussion of reported violations by the Promotion Committees, as the Committees may examine these incidents in the larger context of a student’s general performance.

The School of Medicine Honor Code

All students pledge to conduct themselves honorably, professionally, and respectfully in all realms and aspects of medical education and patient care. Under the Honor System, the student pledges that he or she neither gives nor receives unauthorized aid nor leaves unreported any knowledge of such aid given or received by any other student. Unauthorized aid includes the use of any examinations from previous semesters that have not been pre-approved by the course director and made readily available to all other students taking the course. This pledge applies to all course work, examinations, presentations, or any other activities required for the awarding of any of the graduate degrees offered by the school. This pledge encompasses all clinical work involving patient care and representations of patient care information. Any student taking a course in the School of Medicine, regardless of where registered, is under the jurisdiction of the Honor Council of Vanderbilt University School of Medicine (VUSM) and subject to the penalties it may impose.

Constitution

Article I—Name
The name of the council shall be the Honor Council of Vanderbilt University School of Medicine.

Article II—Purpose
1. To receive and evaluate evidence of Honor Code violations and to assure against false accusations.
2. To determine guilt or innocence.
3. To forward to the dean of the School of Medicine appropriate penalties for the guilty.

Article III—Membership and Officers
1. A faculty member shall be appointed by the dean of the School of Medicine as the Honor Council adviser. His/her roles include ensuring that all the rules are followed. In the case of an accusation, he/she will decide with the co-chairs of the Honor Council whether there is sufficient evidence to proceed with a trial after a formal investigation has been carried out.
2. The Honor Council of the School of Medicine shall be composed of representation from all degree-granting graduate programs under the administrative charge of the school. Currently, this includes Doctor of Audiology (Au.D.), Master of Education of the Deaf (M.D.E.), Master of Science–Speech-Language Pathology (M.S.-S.L.P.), Doctor of Medical Physics (D.M.P.), Master of Science in Medical Physics (M.S.M.P.), Master of Laboratory Investigation (M.L.I.), Master of Public Health (M.P.H.), Master of Science in Clinical Investigation (M.S.C.I.), Master of Science in Applied Clinical Informatics (M.S.A.C.I.), Master of Genetic Counseling (MGC), and Doctor of Medicine (M.D.). Any new graduate degree programs created within the school will become eligible by sufficient enrollment, as stipulated below.
3. The minimum student enrollment limit for a single graduate degree program to be eligible to elect an Honor Council representative is ten. If a program falls below that number, it will not be eligible to have a representative. It will regain eligibility when its enrollment reaches a minimum of ten students. However, some of the programs are closely affiliated; if, in the judgment of the program director(s) of these programs, there is sufficient overlap in required courses, these programs may be thought of as a unit (a.k.a., “affiliated degree programs”) for purposes of Honor Council representation. In these cases, the degree programs will be grouped for representation purposes, and allowed to elect an Honor Council representative on behalf of the affiliated degree programs. Current affiliated degree programs are the Au.D., M.D.E., and M.S.-S.L.P. programs, which will elect two representatives from their combined student cohorts, and the D.M.P. and M.S.M.P. programs, which will elect one representative from their combined student cohorts. All other non-M.D. programs will elect one representative. The M.D. program will follow its traditional practice of electing two representatives from each of the four classes.
4. In the non-M.D. programs, students will vote for Honor Council candidates within their own graduate program or affiliated degree programs. In the M.D. program, students will vote for Honor Council representatives within their own medical student class. Honor Council representatives are elected for one-year terms.
5. Honor Council members will select their own co-chairs. Two co-chairs will be elected from the M.D. program Honor Council representatives, for which all Honor Council representatives will vote, and one co-chair will be elected from the non-M.D. Honor Council representatives, for which all Honor Council representatives will vote. In both cases, co-chairs will be elected by simple majority. Co-chairs are elected for one-year terms and must have served at least one year on the council to be eligible.
6. Voting for Honor Council representatives will be completed no later than April 1 of each year. The new Honor Council will convene to elect its co-chairs no later than April 30. It is the duty of the outgoing Honor Council
co-chairs to assure a successful transition. The exception for the April 1 deadline for election of representatives is for incoming medical students who will elect their representatives in September, and for the entering cohort of students in any one-year degree programs, as long as there are at least ten enrolled students in that program.

**Article IV—Duties of Officers**

1. It shall be the duty of the co-chairs to preside at all meetings of the Honor Council, to arrange for the hearing of any student accused, and to perform all duties common to their office.
2. The co-chairs shall keep full minutes of all meetings and full proceedings of all hearings, which must be kept in permanent files. The co-chairs shall notify all members of all hearings, meetings, and retreats and shall perform any other related duties. These responsibilities will be rotated among the three co-chairs throughout the year.
3. Honor Council representatives for each program, together with the co-chairs, will have primary responsibility for conducting an annual program to educate their fellow students about the Honor Council and its processes, and for assuring the timeliness of elections. Program directors and the Honor Council faculty adviser will act in a supportive and advisory capacity.

**Article V—Meetings**

1. One regular meeting shall be held within four weeks of the start of the school year. At this meeting, the co-chairs of the Honor Council and the faculty adviser will explain the duties and procedures of the Honor Council to the members.
2. Special meetings may be called by the co-chairs at any time and must be called within ten working days when requested by two or more members of the Honor Council.
3. All meetings shall be conducted according to Roberts Rules of Order, Newly Revised.
4. A meeting by the Honor Council to re-evaluate and review the Honor Code should be convened a minimum of every four years.

**Article VI—Quorum**

A quorum for an Honor Council hearing concerning a violation of the Honor Code is nine. This quorum may be adjusted by the co-chairs in circumstances in which students recuse themselves because the hearing concerns a faculty member who is, or will be, in a supervisory position over them. The absolute minimum for an Honor Council quorum shall be seven. In rare circumstances when a quorum is otherwise unavailable, the senior associate dean for health sciences education will appoint a temporary student member or members to assure a quorum is present to meet the timeline requirements for due process.

**Article VII—Hearings**

1. A hearing shall be called by the co-chairs of the Honor Council, if appropriate.
2. The accuser and the accused must be present at all hearings during the presentation of evidence and the accused has a right to question the accuser and any witnesses and make a statement to the Council.
3. Legal counsel will not be allowed for any party at a hearing, but the accused has the right to present a character witness or non-legal trained faculty adviser if he or she so chooses.
4. Any member of the Honor Council related by birth or marriage to the accused or the accuser or who has any other personal interest in the hearing shall recuse himself/herself from participation in that hearing.
5. The proceedings of the hearing are confidential. Any member present at a hearing is not at liberty to discuss its proceedings with anyone other than the members of the Honor Council present at the hearing or other persons with a legitimate need to know, e.g., law enforcement agents.
6. In the event a hearing concerns a charge against a graduate student, a medical student or a faculty member who is in a supervisory role for any Honor Council members, those members shall recuse themselves from participation in the hearing.

7. Upon completion of the review of evidence, the Honor Council in closed executive session shall reach a decision of “guilty” or “not guilty” of violation of the Honor Code by simple majority vote. The Honor Council shall make its determination using an evidentiary standard of “beyond a reasonable doubt.” The co-chairs have a vote in all decisions unless contraindicated by Roberts Rules of Order.
8. Written notice of the Honor Council decision will be sent to the accused and to the dean of the School of Medicine. The dean will also receive the vote count, a written summary of the case, and an oral report of the case from the co-chairs. The Promotion Committee will not be notified unless a verdict of “guilty” has been found. In the case of a “guilty” verdict, the Promotion Committee will receive a written summary of the proceedings. The written summary also will be kept in the permanent records of the Honor Council.
9. When the Honor Council reaches a decision of “guilty,” the penalty, representing the majority opinion of the Honor Council, shall be sent to the dean of the School of Medicine. The recommended penalties should conform to the severity of offenses and may include expulsion from the School of Medicine, and may also include lesser penalties such as failure of a course, or suspension for a designated period of time.

**Article VIII—Publicity**

1. Each new student entering the School of Medicine will be informed by the Honor Council as to the functions of the Honor System and his or her obligations to the Honor Code. Each student will be provided a copy of the Constitution and Bylaws of the Honor System and the Honor Code.
2. At the commencement of each academic year, all students shall reaffirm their commitment to the honor system by signing the Honor Code.
3. Names of the members of the Honor Council will be made known to all students upon commencement of each academic year. The Honor Council members will be accessible to any student to address concerns or questions regarding protocol violations, or other Honor Council issues.

**Article IX—Miscellaneous**

In case a student withdraws from the School after a charge has been made against him or her and before the hearing, the Honor Council shall record the facts and the accused shall not be allowed to re-enter until he or she has had a hearing before the Honor Council.

**Article X—Amendments**

Amendments to this Constitution shall require for their adoption the approval of a majority of the total membership of the Honor Council and ratification by a majority of the voting student body. These amendments must be approved by the dean of the School of Medicine and the faculty adviser before becoming final.

**Bylaws**

**Article I—Reporting an Incident**

1. If a student or an instructor has reason to believe that a breach of the Honor Code has been committed, he/she must, within seven class days, report the incident in signed written form in one of the following ways:
   a. Directly to one or both of the co-chairs of the Honor Council, or
   b. By way of the faculty adviser who will notify the co-chairs of the Honor Council, or
   c. To any member of the Honor Council, who will report directly and only to either the co-chairs or the faculty adviser.

2. Failure to take action on an incident is a breach of the Honor Code. Students are required to report in writing any suspected violations of the Honor Code.

3. Once an incident is reported, it shall be the responsibility of the Honor Council, not the student or instructor, to investigate the incident and determine the next course of action. The student or instructor who reports a violation is charged with maintaining confidence of his or her
accusation; the accused is also required to maintain the confidence of the accusation and the hearing. Such confidence can be broken only as required in response to law enforcement agencies and to assure access to appropriate advice.

4. Perjury before the dean or any Honor Council member regarding the reporting of or investigation into an incident is a breach of the Honor Code and is subject to punishment.

5. Once an incident has been reported, the co-chairs and the faculty adviser will meet to discuss the incident. The co-chairs shall appoint a committee of two members from the Honor Council to investigate the case and report their findings to the faculty adviser and the co-chairs. These two members shall be ineligible to vote in the event the Honor Council is convened. At the conclusion of the investigation, the co-chairs and faculty adviser will then decide whether to convene the Honor Council. If the decision is made to convene the Honor Council, the student in question will be notified that he/she has been formally accused of a violation of the Honor Code. The Honor Council should be convened within ten class days from the initial reporting of the incident. Both the accuser and the accused will be notified of the nature of the charge as well as the time and place of the assembly of the Honor Council.

6. Once the Honor Council is assembled, the accusation will be presented by the co-chairs, and a hearing will be held by the Honor Council.

7. A student who reports his or her own Honor Code violation will be given consideration for his or her initiative in self-reporting the transgression. The co-chairs, with advice of the faculty adviser, will decide if an investigation is warranted.

**Article II—Penalties**

1. Penalties given to those declared “guilty” will be recommended by the Honor Council and enforced by the dean of the School of Medicine as he/she sees fit. The final decision and penalty will be reported by the dean to the student involved, to the reporting individual, and to the Honor Council.

2. Penalties may range from the minimum of failure of the assignment to the maximum of expulsion from Vanderbilt University School of Medicine.

3. If the violation was committed under extenuating circumstances, the Honor Council may, by a majority vote, recommend a suspension of the sentence. However, suspension of the sentence shall in no way alter the findings of “guilt” under the Code.

**Article III—Appeals**

Appeals to any final actions that result from Honor Council hearings can be made with a petition to the Vanderbilt University Appellate Review Board as follows:

a. The appeal petition must be in writing.

b. It must specify the grounds for appeal.

c. It must be filed within seven class days of the original notification of the verdict or within two weeks if school is not in session for seven days following the notification.

**Article IV—Summer Honor Council**

1. The Summer Council will have official functions from the day following university Commencement exercises until the day class registration begins for the fall semester.

2. In the event that a designated member will not be in Nashville during the summer, the respective program representative should appoint a member of his/her class who will be in Nashville, to be approved by the Honor Council.

3. In the event that both co-chairs will not be in Nashville during the summer, then the faculty adviser should recommend a chair from the members of the Honor Council, subject to Honor Council approval.

**Standards of Behavior for Interactions with Medical Students**

**Statement of Standards**

All faculty and staff involved with educating Vanderbilt University School of Medicine students are held to high standards of professionalism and patient care. The learning environment is expected to facilitate students’ acquisition of the professional and collegial attitudes necessary for effective, caring, and compassionate health care. The development and nurturing of these attitudes requires mutual respect between teachers (including faculty, residents, and staff) and students, and between each student and his or her fellow students. Mutual respect between student and teacher, and between fellow students, may be expressed in many ways but all interactions shall include honesty, fairness, and evenhanded treatment. Behavior that is inimical to the development of mutual respect shall be prohibited. Such behavior may include but is not limited to:

1. Harassment of a sexual nature;

2. Discrimination or harassment based on race, sex, religion, color, national or ethnic origin, age, disability, military service, sexual orientation, or gender identity.

3. Grading, promoting, or otherwise evaluating any student on any basis other than that student’s performance or merit.

---

1 All Vanderbilt University policies concerning VUSM student interactions with faculty and staff as set forth in the Vanderbilt University Student Handbook, the Faculty Manual, and the Staff Manual remain in full force and effect.

2 By their express terms, these Standards apply only to interactions which involve one or more medical students; however, it is hoped that these Standards will serve as a guide to all members of the Vanderbilt University School of Medicine community, in all workplace interactions. The reporting procedure outlined herein shall apply only to allegations of the violation of these Standards in interactions involving VUSM student(s).

**Comments**

The following delineates more clearly the behavior enumerated above that may be inimical to the development of mutual respect between students and teacher, and between fellow students. For purposes of these Comments, the term “person” shall refer to a student in interactions between fellow students or, in student-teacher interactions, to the student or teacher, as appropriate.

1. Harassment of a sexual nature may include:
   a. Denying the opportunity for training or rewards because of a student’s gender;
   b. Requesting sexual favors in exchange for grades or other awards;
   c. Making unwanted sexual advances;
   d. Unreasonable and inappropriate sexual or sexist conduct directed towards any person;
   e. Displaying in an unreasonable and inappropriate manner sexually suggestive or pornographic materials; or
   f. Grading or evaluating a student based upon gender rather than performance or merit.

2. Discrimination and harassment may include:
   a. Denying the opportunity for training or rewards because of a student’s age, race, religious affiliation, or any other attribute of the student other than merit or performance;
b. Unreasonable and inappropriate conduct directed towards any person which is intended to insult or stigmatize that person;

c. Exclusion of a student from any usual and reasonable expected educational opportunity for any reason other than as a reasonable response to that student’s performance or merit;

d. Requiring a student to perform personal services such as shopping or babysitting;

e. Showing favoritism among students based upon any attribute of the student(s) other than performance or merit and thereby reducing educational opportunities available to the nonfavored student(s);

f. Grading or evaluating a student based upon any attribute of a student other than that student’s performance or merit;

g. Any physical mistreatment, such as hitting, slapping or kicking, or threatening such physical mistreatment; or

h. Requiring a student to perform menial tasks with the intent to humiliate the student.

Any perceived violation of these Standards of Behavior (“Standards”) should be reported in accordance with the following procedure. Violations of these Standards may subject the offender to disciplinary action. These Standards may be amended at any time by the Executive Faculty. The Standards Committee shall be composed of such members as the dean shall appoint from time to time. In cases where there is a potential conflict between the Standards and university policy, university policy will prevail.

**Reporting Procedure**

When a student feels that he or she has been mistreated, the student is encouraged to report the incident to university and/or medical school officials through a variety of reporting mechanisms (these include Veritas, the School of Medicine ombudsman, trained faculty members, and the Vanderbilt University Title IX and Discrimination office). Students are provided information about resources for such reports during orientation. When the mistreatment involves an allegation of discrimination and/or harassment, including sexual misconduct and/or intimate partner violence, Vanderbilt University faculty and staff members must report the incident to Vanderbilt University Title IX and Discrimination. If there is a report of sexual misconduct and/or intimate partner violence involving a student, the Sexual Misconduct and Intimate Partner Violence Policy, which can be found in the Vanderbilt University Student Handbook, applies to all Vanderbilt students, including students in the School of Medicine. Please consult that policy for more information.

The ombudsman is not a member of the administration, nor a director of a major medical school course. In cases where the VUSM ombudsman is consulted, the ombudsman carefully reviews each incident with the student and develops an action plan accordingly. Students are fully protected from retaliation in all cases. The ombudsman has the full support of the medical school administration in handling these delicate matters.

**Limits of Confidentiality**

**Imminent Harm/Sexual Misconduct**

*Imminent Harm to Self or Others.* Consistent with Federal Law and Vanderbilt University policy, VUSM may release student information normally considered confidential to appropriate individuals (e.g., health care personnel, police, etc.) if such information is necessary to protect the health or safety of the student or other individuals.

**VU Policy on Sexual Misconduct.** The Vanderbilt University Student Handbook includes a Sexual Misconduct and Other Forms of Power-Based Personal Violence policy. Students who experience violations of this policy are encouraged to report such incidents. It should be noted that all VUSM faculty members, including those in the VUSM advising system, as well as all VUSM administrators, are not confidential resources (they are known as “mandatory reporters”). As outlined in the policy, mandatory reporters are required to report possible violations of this policy to the Title IX Coordinator so that the university can take steps to address the matter promptly and resolve it fairly.

**Conflicting Roles**

**Policy on Multiple Roles**

Many VUSM faculty members hold multiple roles in our education program, and we believe that our students benefit from rich relationships with various supportive faculty members. However, faculty members engaged in multiple educational roles can face competing demands, which may directly or indirectly affect (or have the appearance of affecting) an individual’s professional judgment in exercising any educator duties and responsibilities.

Of particular concern to students is the intersection of roles involving advising students regarding personal or academic struggles with roles in assessment of student performance or assigning grades. Because not all conflicts can be eliminated, it is necessary to establish a plan for managing and minimizing conflict.

Conflict management typically involves ensuring that any individual in an advising role does not serve as the sole assessor of students in any required course. During the academic year, when individuals are proposed for new roles, assignments are reviewed for potential conflicts. Conflict management plans are created by faculty members involved and are reviewed and maintained by the associate dean for medical student affairs (MD program) and the assistant dean for health sciences education (other VUSM degree programs).

**Policy on VUSM Faculty Supervising Family**

It is the policy of Vanderbilt School of Medicine that students may not be supervised or graded by a parent or family member.

**Policy on VUSM Educators Providing Student Health Care**

Vanderbilt University Medical Center physicians occasionally provide clinical care for Vanderbilt students. Some of these faculty members also teach and assess students in the classroom or clinical setting. Should a situation arise in which a Vanderbilt faculty member finds himself/herself in a dual role as care provider and as a teacher/assessor of a Vanderbilt student, he/she must recuse himself/herself from the teacher/
assessor role. Examples of such situations include faculty serving as small group leaders in a course, or as team leaders for clinical learning experiences. Furthermore, if a Vanderbilt faculty member serves as a course or clinical learning experience director, placing him/her in a teacher/assessor role with students in a degree program, he/she should not accept as patients students in that program.

When a student has a pre-existing therapeutic relationship as a patient of a faculty member who directs a course or clerkship, the patient-provider relationship should not be disrupted. In these situations, the faculty member must discuss the situation with the student and arrange for an alternative means of assessment in the course or clinical experience. This arrangement would likely involve identifying a different faculty member to provide the assessment in the course or clinical experience. This policy serves to secure and protect the integrity of the learning environment at the School of Medicine. For questions regarding the implementation of this policy, please contact the senior associate dean for health sciences education.

Principal Clinical Education Affiliates

Students enrolled at Vanderbilt University School of Medicine must complete required course work at VUSM or a VUSM affiliate institution, unless otherwise explicitly indicated.

Vanderbilt University Medical Center

Facilities

Vanderbilt University Hospital

Vanderbilt University Hospital (VUH) opened in 1980, with the major addition of the Critical Care Tower in 2009. The hospital is dynamic, growing, and dedicated to meeting the most critical and complex needs of our region, continuing Vanderbilt’s more than century-old tradition of offering the best in patient care.

Many patients seen in the hospitals are from states other than Tennessee, with the majority coming from Kentucky, Alabama, and Mississippi.

Adjacent and attached to VUH is Medical Center East, primarily an outpatient services building, but also housing some operating rooms, patient rooms for Labor and Delivery, the Vanderbilt Bill Wilkerson Center and the Vanderbilt Orthopaedics Institute.

The Monroe Carell Jr. Children’s Hospital at Vanderbilt

The Monroe Carell Jr. Children’s Hospital at Vanderbilt opened as a stand-alone facility in 2004, and is a place of hope and healing for pediatric patients and their families. Recognized as one of the premier children’s hospitals in the nation by U.S. News and World Report for nine years running, Children’s Hospital cares for the sickest patients in the region and beyond.

Children’s Hospital is the most comprehensive pediatric facility in Tennessee, providing services including neurosurgery, cancer treatment, trauma care, transplant, and much more. Children’s Hospital operates the region’s only Level I pediatric trauma unit and a neonatal intensive care unit with the highest designated level of care.

The facility is filled with state-of-the-art equipment and information systems to provide the best treatment for patients. It offers a variety of family accommodations to help fulfill its mission of patient-and family-centered care. In addition, Children’s Hospital is a top-ranked teaching and research facility. As a nonprofit organization, the hospital cares for children of Tennessee and surrounding states regardless of their ability to pay.

Vanderbilt Psychiatric Hospital

Vanderbilt Psychiatric Hospital, which opened in 1985, provides inpatient and partial hospitalization services to children, adolescents, and adults with psychiatric and substance abuse problems. Services include 24-hour crisis assessment and a year-round accredited school for children and adolescents.

Vanderbilt Stallworth Rehabilitation Hospital

Vanderbilt Stallworth provides comprehensive inpatient and outpatient rehabilitation services for adult and pediatric patients with neurologic, orthopaedic, and other injuries, as well as chronic conditions and disabilities. The hospital specializes in treating stroke, brain, and spinal cord injury; multiple traumas; amputations; hip fracture; and other diagnoses. Stallworth is a designated Stroke Center of Excellence and repeatedly exceeds the national benchmarks for patient satisfaction and functional outcomes. This hospital is a joint venture with HealthSouth Corporation.

Vanderbilt-Ingram Cancer Center

Vanderbilt-Ingram Cancer Center (VICC) is Tennessee’s only National Cancer Institute (NCI)-designated Comprehensive Cancer Center providing treatment for both adult and pediatric cancer patients. It is also a member of the National Comprehensive Cancer Network, a nonprofit alliance of twenty-six of the world’s elite cancer centers collaborating to improve cancer care for patients everywhere. The Cancer Center unites physicians and scientists in research programs in key areas. VICC is ranked in the top 10 in competitively-awarded NCI grant support.

VICC is one of the few centers in the country with a comprehensive program for cancer survivors regardless of age, type of cancer, or where they received their oncology treatment. The center’s clinical trials program includes robust work in Phase I drug development and designation by the NCI for Phase I and II clinical trials.

The center also boasts several donor-supported research initiatives, including the Frances Williams Preston Laboratories established by the T. J. Martell Foundation, the A. B. Hancock Jr. Memorial Laboratory for Cancer Research, and the Robert J. Kleberg, Jr., and Helen C. Kleberg Center for Personalized Cancer Medicine.

Vanderbilt Kennedy Center for Research on Human Development

The Vanderbilt Kennedy Center strives to improve life for people with disorders of thinking, learning, perception,
communication, mood, and emotion caused by disruption of typical development. Its core values include the pursuit of scientific knowledge with creativity and purpose; the education of scientists, practitioners, families, and community leaders; the facilitation of discovery by Kennedy Center scientists; and the translation of knowledge into practice. The center is one of fourteen National Institutes of Health research centers on mental retardation and other developmental disabilities. It has also been named a University Center for Excellence on Developmental Disabilities Education, Research, and Service by the federal Administration on Developmental Disabilities. The center is an interdisciplinary research, training, diagnostic, and treatment institute, embracing faculty and resources available through Vanderbilt University Medical Center, the College of Arts and Science, and Peabody College.

Vanderbilt Diabetes Center
The Vanderbilt Diabetes Center provides a comprehensive approach to diabetes for patients of all ages that includes all aspects of health related to diabetes. It also offers programs to equip the next generation of caregivers and scholars. Other programs support the diabetes-related research of VUMC faculty members.

Center for Experiential Learning and Assessment (CELA)
The Center for Experiential Learning and Assessment (CELA) provides an educationally rich simulation environment for training our students and other health care professionals to practice the highest quality clinical care. Simulation technology has now become a standard for medical education, surgical training, and health care team training. Such programs have resulted in improved performance, quicker response time, and less deviation from practice standards. Healthcare simulators increase trainee confidence and competence, improve patient safety, and can also yield cost and process efficiencies. Our work is grounded in theory-based research and informed by the best educational practices for competent clinical practice. CELA is also instrumental in conducting rigorous research that extends our knowledge and practice of experiential learning and assessment by simulations. The center consists of three programs: the Program in Human Simulations, the Simulation Technologies Program, and the Programs in Surgical and Anatomical Simulation. The Program in Human Simulations brings the traditional standardized patient methods toward a broader use of simulations involving all aspects of human interaction in medicine. The Simulation Technologies Program emphasizes the sophisticated use of computers, task trainers, virtual reality and mannequin-based technologies to simulate clinical challenges. The Program in Surgical and Anatomical Simulation is possible thanks to cadaveric gifts made through the Anatomical Donations Program. All programs provide both unique and integrated approaches to training our medical students in a safe and effective educational environment.

Rudolph A. Light Hall
Light Hall provides classroom and laboratory space for students in the School of Medicine. It houses the Department of Biochemistry, the Department of Molecular Physics and Biophysics, and the Howard Hughes Medical Institute.

Ann and Roscoe Robinson Medical Research Building
Laboratories and academic space for pharmacology, biochemistry, and molecular physiology and biophysics are housed in the Ann and Roscoe Robinson Medical Research Building. The eight-story building is also home to the A. B. Hancock Jr. Memorial Laboratory for Cancer Research.

Frances Preston Medical Research Building
This building is named in honor of the late Frances Williams Preston, President and CEO of Broadcast Music, Incorporated. This building consolidates the Vanderbilt-Ingram Cancer Center's programs into one primary location on the VUMC campus.

Medical Research Building III
MRB III houses research laboratories, teaching laboratories, research support areas, offices, conference rooms, classrooms, and a greenhouse for research and teaching. It is a joint undertaking of the College of Arts and Science and VUMC.

Medical Research Building IV
MRB IV houses a significant amount of wet lab space and supports continued growth in VUMC research programs.

Medical Center North
The Newman Clinical Research Center, an inpatient orthopaedic unit, and a general-care unit are inside Medical Center North. The complex also houses laboratories and administrative support services for VUMC.

Vanderbilt Health Williamson County
Vanderbilt Health Williamson County offers more than 250 physicians in practices ranging from primary care to sports medicine, GI, cancer care, imaging, and pediatrics.

Vanderbilt Dayani Center for Health and Wellness
The Vanderbilt Dayani Center is a medically based fitness/health promotion center that specializes in modifying risk factors, for conditions including cardiovascular disease, weight management, stress, sedentary lifestyle, and smoking. It was the first Certified Medical Fitness Center in Tennessee, is closely aligned with the Department of Physical Medicine and Rehabilitation, and serves patient care, research, and education functions within VUMC.
VUMC Strategy and Innovation Office
The Strategy and Innovation Office’s mission is to accelerate change in healthcare. It provides methods for reducing time to results, conducts research through demonstration projects, and supports active learning through sessions that leverage facts during solution design.

mc.vanderbilt.edu/root/vumc.php?site=strategyandinnovation

Vanderbilt Heart and Vascular Institute
The Vanderbilt Heart and Vascular Institute is a comprehensive and integrated program offering diagnosis, treatment, minimally invasive therapies, surgical intervention, disease management, state-of-the-art techniques, and personalized treatment programs to meet each patient’s unique needs.

vanderbilthealth.com/heart

Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences
The Vanderbilt Bill Wilkerson Center is devoted to comprehensive patient care, education, and research in the field of communication disorders and diseases, as well as ailments of the ear, nose, throat, head, and neck.

vanderbilthealth.com/billwilkerson

Vanderbilt Transplant Center
The Vanderbilt Transplant Center, one of the Southeast’s largest, is a multidisciplinary alliance of transplant specialists. Each transplant program within the center represents a collaboration of medical and surgical professionals working together in the best interests of the transplant patient.

vanderbilthealth.com/transplant

Graduate Medical Education
Vanderbilt University Medical Center has built a strong reputation as a national and international leader in medical education of health professionals, research in medical science, and patient care. Residency training began at Vanderbilt University Medical Center with just twelve residents in 1925. Now, VUMC trains more than 1,000 house staff in 90 accredited residency and fellowship programs.

Residency Training
Medical school graduates preparing for the practice of medicine usually spend three or more years in residency training in order to be able to sit for the certification examination in their chosen specialty. Such supervised experiences at Vanderbilt cover an incredibly broad range of specialties and allow the learner to gain graduated responsibility with the ultimate goal of independent practice. Vanderbilt attracts highly qualified candidates from diverse backgrounds, ensuring a house staff that is devoted to delivering safe, high-quality patient care, to succeeding in their chosen discipline, and to teaching other learners in the process. As a result, the house staff take their responsibility in medical student teaching as both an honor and a privilege and devote considerable time to the medical students.

In addition to their primary responsibilities at Vanderbilt University Medical Center (including Vanderbilt University Hospital, Monroe Carell Jr. Children’s Hospital at Vanderbilt, the Vanderbilt Psychiatric Hospital, and The Vanderbilt Clinic), the residents also work in a variety of other clinical settings across Nashville including the Veterans Administration Hospital, St. Thomas Midtown (formerly Baptist Hospital), and St. Thomas West, with supervision by outstanding faculty in each setting.

Vanderbilt University Medical Center (VUMC) is a major referral center and consequently has a patient population with complex pediatric, medical and surgical problems. The Veterans Administration Hospital, adjacent to VUMC, serves veterans and their families from throughout the mid-south and is an important component of the teaching program. All physicians at the VA Hospital are full-time faculty members of the School of Medicine.

Post-Residency Clinical Fellowships
After residency training, many physicians choose to pursue further subspecialization through a clinical fellowship. Fellows admitted to these programs must have completed an approved residency program. These training programs have as their goal the training of physicians for practice and certification in a medical subspecialty. As with the residents mentioned above, the fellows are expected to participate in departmental activities related to teaching, clinical services, and research and serve as another outstanding resource for medical student education.

Office for Continuous Professional Development
Vanderbilt University School of Medicine and Vanderbilt University Medical Center recognize a major commitment to the continuous professional development of Vanderbilt and community physicians and others in the health professions. At Vanderbilt, continuing medical education is considered an important part of the continuum of medical education which is initiated in the undergraduate experience, progresses through graduate medical education, and matures in ongoing continuing medical education and continuing professional development. The Division of CME sponsors learning opportunities for physicians and other members of the health care team that will enable them to provide the very best possible care to their patients and perform optimally in their other professional responsibilities as measured by improvements in competence, performance, and patient health status. The Vanderbilt University School of Medicine Division of CME maintains Accreditation with Commendation from the Accreditation Council for Continuing Medical Education (ACCM), recognizing demonstrated engagement with the quality improvement enterprise in a way that supports physician learning and quality patient care.

Vanderbilt has also been recognized by the Multi-Specialty Board of the American Board of Medical Specialties (ABMS) as a certified site for the Maintenance of Certification (MOC) Portfolio Program. The MOC Portfolio Program was established by ABMS to permit institutions such as Vanderbilt to provide support to physicians who are pursuing Maintenance of Certification Part IV projects, thus aligning physicians’ performance improvement requirements with the institution’s performance improvement goals. The Vanderbilt MOC Portfolio Program is a collaborative effort of the Office of Quality, Safety and Risk Prevention, the Informatics Center, and the Office for Continuous Professional Development.

Inquiries about CME or MOC should be directed to the Office for Continuous Professional Development or to departments and divisions about specific programming.
Tennessee Valley Healthcare System of the Veterans Administration

The Tennessee Valley Healthcare System (TVHS), a part of the U.S. Department of Veterans Affairs, is a Level 1A, integrated tertiary healthcare system comprised of two hospitals, the Alvin C. York Campus in Murfreesboro, TN, and the Nashville Campus in Nashville, TN. TVHS has over 20 community-based outpatient clinics located in Tennessee and Kentucky.

TVHS provides ambulatory care, primary care, and secondary care in acute medicine and surgery; specialized tertiary care; transplant services; spinal cord injury outpatient care; and a full range of extended care and mental health services.

TVHS’s Nashville Campus is the only VA facility supporting all solid organ transplant programs, including total in-house kidney and bone marrow transplants and is a national referral site for bone marrow and solid organ transplants. The York Campus is a network referral center for mental health services, long term psychiatric care, geriatrics, and extended care. TVHS provides a full range of specialized medical services.

VUMC is co-located with the TVHS Nashville campus, and they collaborate on many research and educational endeavors, with hundreds of students and providers cross-affiliated with both organizations.

VA Academic Partnership Council for the Department of Veterans Affairs, Tennessee

The VA Academic Partnership Council is the fundamental administrative unit for policy development and evaluation of educational and research programs at the affiliated Department of Veterans Affairs, Tennessee Valley Healthcare System (TVHS). It is composed of senior faculty members of the School of Medicine and others who are associated with TVHS.

Committee Voting Members:

Veronica Mallett, M.D., Chairperson. John Nadeau, M.D., Co-chairperson.
David Raiford, M.D., R. Daniel Beauchamp, M.D., Leon Dent, M.D.,
Brian Christman, M.D., Cynthia Johnson, R.N., M.S.H.C.A., N.E.A.-B.C.,
Stephan H. W. Heckers, M.D., Suzanne Jenié, M.B.A.,
V.H.A.-C.M., Donald Brady, M.D., Don Rubin, M.D., Sam R. Sells,
M.D., Duane Smoot, M.D., Nancy Brown, M.D., James Staiger, M.D.,
David Baker, M.D., Stephen McLeod-Bryant, M.D., Linda Norman,
D.S.N., R.N., F.A.A.N., Lloyda B. Williamson, M.D., Leonard Webster,
M.D., Alphonse Pasipanodya, M.D.

Non-Voting Members:

Ronnie Smith, Bonnie Miller M.D., Frank Royal, M.D., Jennifer J. Lipke,
Marianne Myers, Brent Holman.
Admission

Doctor of Medicine (M.D.)

Requirements for Entrance

Vanderbilt University School of Medicine seeks students with a strong background in both science and liberal arts who will have the baccalaureate degree before matriculation. The Medical College Admission Test (MCAT) is required and used along with other observations to predict success in pre-clinical course work.

Vanderbilt University School of Medicine recognizes that the undergraduate academic experience of applicants varies greatly. Therefore, we have made the decision to move away from “requirements” to “recommendations.” The expansive and ever-changing landscape of medicine and its practice necessitates that an applicant have demonstrated competencies in the natural and life sciences, social sciences, and mathematics. These competencies can be met through traditional and/or newly-established interdisciplinary courses of study in an accredited institution of higher learning. The use of AP or other credit is acceptable, but it is strongly encouraged to build stronger competencies through courses taken in college. Although there is no timeframe in which students must meet the above competencies, it is recommended that students have recent exposures to most or all of these areas. Competitive applicants should demonstrate in-depth competency in each of the following areas of study, based on the AAMC-HHMI Scientific Foundations for Future Physicians and AAMC-Behavioral and Social Science Foundations for Future Physicians. Mastery of competencies is reflected by a strong performance in the classroom and on the MCAT, as well as in letters of evaluation.

Biology: Applicants should demonstrate competence in the understanding of molecular and cellular biology, genetics, and how they regulate organ and organismic structure and function. Fields of study analyzing diverse human properties are viewed in a strong, positive light.

Chemistry/Biochemistry: Applicants should demonstrate competence in the basic principles of chemistry as it pertains to living systems. Studies in biochemistry are an exemplary way to prepare students for training in medicine science.

Mathematics/Statistics and Physics: Applicants should demonstrate competence in the basic principles of physics and mathematics underlying living systems. Applicants should demonstrate basic competence in statistics or biostatistics, which is important to understand the quantitative aspects of medicine and biomedical research.

Social Sciences and Communication: It is imperative that the applicant demonstrate competence in the humanistic understanding of patients as human beings and as part of a familial and social structure. In this regard, studies in psychology and sociology are viewed favorably. It is required that the applicant speaks, writes, and reads English fluently.

The faculty of the Vanderbilt University School of Medicine recognizes its responsibility to present candidates for the M.D. degree who have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. Candidates for the M.D. degree will ordinarily have the broad preliminary preparation to enter postgraduate medical education in any of the diverse specialties of medicine.

Recommendations for Entrance

A broad experience in non-science courses is encouraged, especially experience beyond the introductory course level in areas such as English, the humanities, the arts, and the social and behavioral sciences. A major in non-science courses does not affect selection.

Selection Factors

Vanderbilt University School of Medicine (VUSM) seeks to matriculate a diverse group of academically exceptional students whose attributes and accomplishments suggest that they will be future leaders and/or scholars in medicine. To accomplish this goal, VUSM provides a review of each candidate by multiple members of the faculty who are broadly representative of the faculty body. The committee uses a holistic approach to evaluate an array of applicant attributes, including academic excellence, personal characteristics, accomplishments in research, leadership, service to others, contribution to diversity (gender, race, ethnicity, sexual preference, socioeconomic background, geographic origin), and participation in extracurricular activities. A criminal background check is required before matriculation.

Medical College Admission Test

The Medical College Admission Test is given under the auspices of the Association of American Medical Colleges and is required of applicants to Vanderbilt. It is given multiple times each year. Since the examination score is used by medical schools in the selection of applicants, candidates should take the test in the spring prior to the time application is submitted, if possible. Results of the September examination are acceptable, but will delay review of the application until scores are received.

Application Procedure for Admission

As a convenience to the applicant, Vanderbilt University School of Medicine participates in the American Medical College Application Service. All application materials may be obtained online through AMCAS by going to www.aamc.org. Applications are received online by AMCAS any time after 1 June and before 1 November preceding the anticipated enrollment date the next year.

The Screening Admission Committee evaluates the initial application materials. The Interview Admission Committee evaluates AMCAS, secondary application, and letters of recommendation to decide which applicants will be invited for an interview. Interviews are conducted at Vanderbilt between September and February. The Executive Admission Committee evaluates the application materials and interview reports to decide which applicants will be invited to join the entering class. Invitations to join the class are made in December and February.

Vanderbilt does not participate in the Early Decision Program through the American Medical College Application Service and does not have an Early Assurance Program.

Vanderbilt University School of Medicine offers various dual degree programs. Application is made to each program separately, and admission to both programs is required to enter a dual degree program.

A single application is made to the M.D./Ph.D. program by
indicating M.D./Ph.D. degree on the AMCAS application to Vanderbilt University School of Medicine and completing the MSTP secondary application. The application will be reviewed by the MSTP admission committee.

**Transfer Students**
Due to Curriculum 2.0, transfer students will no longer be accepted to Vanderbilt University School of Medicine.

**Medical Innovators Development Program (MIDP)**

**Admission**
MIDP students constitute a small cohort of students in the M.D. program with individualized content in one of three MIDP translational tracks (imaging, informatics and systems design, and medical devices), as well as generalized content in intellectual property, entrepreneurship, management, and the FDA regulatory process. The program emphasizes multi-disciplinary collaboration with faculty expertise across the schools of medicine, engineering, and business. A criminal background check is required before matriculation.

**Admission Requirements**
The MIDP admission process is the same as that for the M.D. program. All course recommendations applicable to the M.D. program apply to MIDP applicants as well. Please refer to the competency-based requirements outlined for the M.D. program. Other requirements for the MIDP program are described below.

1. MIDP applicants must have a doctoral degree in engineering or applied sciences, with evidence of academic excellence. The doctoral program must be completed prior to matriculation. If conferral of the doctoral degree will not take place until after matriculation, a letter from the registrar or dean of the institution awarding the degree stating that all degree requirements have been met (including approval of dissertation) is required before matriculation.

2. Like traditional M.D. applicants, MIDP applicants will submit letters of recommendation. However, one should be from a research mentor or work supervisor who can describe the applicant’s potential for and commitment to success as an applied physician-scientist.

3. In addition to the three essays submitted through the AMCAS application, MIDP applicants must submit an MIDP-focused essay explaining the reason(s) the applicant is interested in joining the Medical Innovators Development Program, how the MIDP program will help the applicant achieve his or her career goals, and how the goals relate to imaging, medical devices, or informatics. (~500 words)

The MIDP Leadership Team has the responsibility of reviewing MIDP applications for admission and making recommendations to the chairs of admission.

**Financial Support**
Funding for tuition is provided for those who gain admission to the Medical Innovator Development Program.

**Oral and Maxillofacial Surgery–Doctor of Medicine Program (OMS–MD)**
The Vanderbilt University Medical Center offers an Oral and Maxillofacial Surgical (OMS) Residency Program that, in collaboration with Vanderbilt University School of Medicine, allows qualified individuals to complete a Vanderbilt University M.D. in three years and thereafter progress directly into the VUMC OMS residency. The Vanderbilt University Oral and Maxillofacial Surgical (OMS) Residency Program and VU M.D. program accept one student each year to this program. The OMS-MD curriculum allows trainees to meet graduation requirements for the doctor of medicine at the end of three years, at which point the Vanderbilt University M.D. is conferred. During the last three of six years in the OMS-MD program, the trainees continue full time in the VUMC OMS residency program.

With a case-based, system-based learning model and personalized medical school curriculum, there are generous opportunities for the OMS resident-medical student to explore areas of personal interest and emphasis programs for an outstanding medical/surgical education. The program prepares residents for the community practice of oral and maxillofacial surgery as well as for advanced fellowship training and academic careers. Areas of clinical strength include the comprehensive management of all facets of facial trauma, benign and malignant head and neck pathology, orthognathic surgery, facial reconstruction, secondary cleft care, and dental/vertebral surgery and implants with an emphasis on implant site development.

Applications to the OMS-MD program are accepted through ADEA PASS (www.adea.org/PASSapp) beginning in mid-May of each year. Applications are due via the PASS system by September 15 of each year, and interview invitations are sent directly to selected candidates. Interviews are conducted in the months of October and November. Detailed information can be found at www.mc.vanderbilt.edu/deptoralmaxiltsurgery/28484.

The selection process for applicants emphasizes past academic performance, personal attributes such as a sound work ethic, dedication, honesty, and a demonstrated commitment to postgraduate training in oral and maxillofacial surgery. The latter may be demonstrated through completion of one or more OMS externships, preferably of at least two (2) weeks’ duration. Letters of recommendation are required and specified by the PASS application information for this program. Such letters are very carefully reviewed and should be provided by dental school faculty who can share personal knowledge of the applicant’s qualifications, commitment, personal attributes, and accomplishments.

One trainee is identified annually through the OMS residency selection process. The OMS department recommends the selected candidate to the School of Medicine Admission Committee. The Admission Committee reviews the applicant’s credentials and makes an M.D. program admission determination.
M.D. Dual Degree Programs

For all M.D. dual degrees, except the M.D./Ph.D., the first three years are normally spent in the medical school program. Ideally, students will apply for dual degree status before enrolling in either degree program. However, M.D. students may elect to apply for admission to a recognized dual degree program at any time during their first three years in the medical school. Students who apply for admission to the medical school during their first year in another recognized dual degree may also be considered for dual degree status.

In most cases, after year three of the M.D. curriculum, students begin work on their other degree program. Depending on the other program, students may complete the second degree before returning to the medical school. The dual degree program allows students to reduce the period of time required to complete each degree separately, usually eliminating one full year of study.

Due to the blended nature of dual degree experiences, participating students are expected to abide by the School of Medicine Honor Code and to maintain the professional standards of the M.D. degree while participating in the alternate degree program, in addition to complying with any standards established by that alternate program. If a student is concerned that expectations between programs may be in conflict, s/he should confer with the associate dean for medical student affairs.

Medical Scientist Training Program (MSTP)

The central goal of the Medical Scientist Training Program (MSTP) at Vanderbilt University is to identify, mentor, and foster the careers of a diverse workforce of superior future leaders in academic medicine, industry, and government who are dedicated to improving human health through research, clinical activities, and leadership. Based on solid clinical training and rigorous, highly impactful research training, our program fosters the development of independent scientific careers. We provide students with an integrated curriculum comprising a strong core education in medicine and intensive training in scientific inquiry. Successful completion of the program leads to both the M.D. and Ph.D. degrees. MSTP students come from a diverse applicant pool drawn from throughout the nation and abroad.

MSTP Curriculum

The MSTP is a dual endeavor between the Vanderbilt University School of Medicine and the Vanderbilt University Graduate School. Trainees are required to fulfill all of the requirements for both the M.D. and Ph.D. degrees. Since some competencies for the M.D. degree are met by the graduate school experience, it is possible for MSTP students matriculating July 2013 or after to complete the M.D. program in a total of three years. The MSTP allows both dual and alternating enrollment in the School of Medicine and the Graduate School. MSTP students will typically complete the FMK and FCC phases, exit for graduate studies, and then return for a single year in the Immersion Phase.

The cornerstone of the Vanderbilt MSTP is training in scientific inquiry afforded by a rigorous Ph.D. experience. After completing the first two years of medical school and at least two laboratory rotations, trainees select a laboratory and department for graduate studies. This selection is typically formalized before the end of the second year of medical school. Requirements for successful completion of the Ph.D. degree are the same for all students at Vanderbilt, and the Ph.D. thesis must be successfully defended prior to reentry into medical school.

Most MSTP students will begin their final year of medical school in early July with the Clinical Immersion phase of their training.

To facilitate the training of clinical investigators, we developed a distinct track within the Vanderbilt MSTP called the MSTP-Clinical Investigation Track (MSTP-CIT). The goal of the MSTP-CIT is to provide comprehensive training in science for physician scientists engaged in translational and patient-oriented research. This program is intended for students who enter the MSTP after the third year of medical school or during residency or fellowship.

MSTP Program Activities

There are a number of educational programs developed specifically for the training of physician scientists in the MSTP. A brief summary of the major activities can be found in the Programs and Policies section under Special Program Requirements in the Academic Programs and Policies for the Doctor of Medicine section of this catalog.

Financial Support

Funding for tuition and a stipend is provided for those who gain admission to the Medical Scientist Training Program. A training grant from the NIH supports about 19 percent of the expenses for the MSTP; the remainder comes from institutional support and philanthropy. Students who do not maintain good academic standing risk losing this financial support.

M.D./J.D.

Students must apply separately to both the Vanderbilt University School of Medicine and the Vanderbilt Law School and be accepted by both programs to pursue the dual M.D./J.D. degree. Students in the dual M.D./J.D. program will have the opportunity to complete both degrees in six years.

M.D./M.S. in Biomedical Informatics

Students must apply separately to both the Vanderbilt University School of Medicine and Vanderbilt’s Biomedical Informatics Department and must be accepted by both programs to pursue the dual M.D./M.S. in biomedical informatics degree. Students in the dual M.D./M.S. in biomedical informatics program will have the opportunity to complete both degrees in six years.

M.D./M.Div. and M.D./M.T.S.

Students with interest in medical and divinity degrees will have the opportunity to enroll in one of two dual degree programs. Students must apply separately to the Vanderbilt University School of Medicine and the Vanderbilt Divinity School and be accepted by both to pursue the dual M.D./M.Div. (M.D./Master of Divinity) or the M.D./M.T.S. (M.D./Master of Theological Studies) degree.

Students in the dual M.D./M.Div. program will have the opportunity to complete both degrees in six years.

The Master of Divinity is a professional degree and prepares students for the practice of ministry. This program has a required field education component as part of the Master of Divinity degree requirements. In this program, students will carry 15 credit hours per semester while in the Divinity School.
M.D./M.Ed.

Education is an integral part of medicine. The word “doctor” comes from the Greek word meaning “teacher.” Whether a student chooses a career in research or clinical practice, there always will be a need to teach students, patients, and colleagues. Students who choose the M.D./M.Ed. dual degree program may be interested in patient education or in a career in an academic center working in medical education. They also may be interested in leadership positions at the national level that interface with health policy and education. Education will be a large part of prevention in future medical practice.

Students must apply separately to both the Vanderbilt School of Medicine and Peabody College of Education and Human Development and be accepted by both programs to pursue the dual M.D./M.Ed. degree.

Students in the dual M.D./M.Ed. program will have the opportunity to complete both degrees in five years.

M.D./M.P.H.

Students must apply separately to the M.D. and the M.P.H. programs in the School of Medicine and be accepted by both programs to pursue the dual M.D./M.P.H. degree.

The M.P.H. degree requires 42 academic credit hours of course work, which include didactic core and track-specific courses, as well as courses associated with the public health practicum and thesis.

Dual degree students spend a minimum of four terms focused on M.P.H. required course work. Students typically complete most or all of the required 42 credit hours during these four terms. The summer term includes didactic courses in the month of May and the completion of the public health practicum.

The M.D. program’s Research Immersion Phase may be completed before matriculating in the M.P.H. program, and/or it may be integrated with the M.P.H. program’s thesis requirements. This time should be planned in advance with input from both the M.D. and M.P.H. programs.

An important component of the M.P.H. program is a mentored research investigation. Pre-identification of a qualified faculty member willing to serve as the student’s mentor should be arranged with the help of M.P.H. program staff.

Before a dual degree student can matriculate in the M.P.H. program, he or she must be in good academic and financial standing with the M.D. program and receive approval for his or her plan of study from the M.P.H. program director.

Students in the dual M.D./M.P.H. program will have the opportunity to complete both degrees in five years. Additional information may be found at medschool.vanderbilt.edu/mph/md-mph.

M.D./M.B.A.

Students must apply separately to both the Vanderbilt University School of Medicine and Vanderbilt Owen Graduate School of Management and be accepted by both programs to pursue the dual M.D./M.B.A. degree.

Students in the dual M.D./M.B.A. program will have the opportunity to complete both degrees in five years. The first three years are spent in medical school. Students spend their fourth year at the Owen School and then spend the fall semester of year five in medical school and the spring semester of year five at the Owen School.

M.D./M.A. in Medicine, Health, and Society

In 2008, the Vanderbilt University Faculty Senate approved a master of arts degree in Medicine, Health, and Society (MHS). The proposal for this fully interdisciplinary degree originated from the Vanderbilt University Center for Medicine, Health, and Society (CMHS), which was established in 2003. The goals of CMHS are to promote the study of health and health care in their social, cultural, and historical contexts, and to explore the interface of bioscience, technology, and the humanities.

In addition to educating outstanding clinicians, Vanderbilt University School of Medicine is committed to developing future leaders and scholars in medicine. We recognize that the current challenges facing health and health care demand leaders and scholars in many areas related to medicine. The M.A. in MHS allows selected students to extend their scholarly interests in interdisciplinary areas, although prior work in one of those areas is not required. The MHS degree provides students with additional knowledge and research experience to prepare them for academic careers focused on the political, social, economic, and cultural contexts of the practice of medicine, as well as on biomedical ethics, patient-provider relationships, and health policy.

Students must be accepted by both the Vanderbilt University School of Medicine and the Graduate School, and acceptance to one program will not ensure acceptance to the other. Dual degree students will be able to enter the M.A. program after any year of medical school. If students choose to begin their M.A. studies after the fourth year, they will be allowed to delay graduation until after completion of both degrees, as long as they are officially enrolled in the dual degree program. Requirements for the M.D. degree will be the same as those for non-dual-degree students. Students will have the opportunity to complete both degrees in five years.

M.D./M.S.C.I.

The Vanderbilt Master of Science in Clinical Investigation program trains investigators in the techniques and processes utilized in patient-oriented research. Through a formal mentored research program combined with didactic work, the program provides trainees with a strong foundation in study design, biostatistics, biomedical ethics, genomics, and drug and device development. There are a number of electives, including but not limited to advanced epidemiology, epigenetics, data management, and big data that allow trainees to get more in-depth involvement in a specialized area. A critical component of the M.S.C.I. program is a direct, mentored experience during the training period, and beyond. Hands-on research involvement and continued exposure to the patient-oriented research environment are major requirements of the M.S.C.I. program. Graduates successfully compete for grants such as the K23, VA CDA, R01, and major foundation grants.

Candidates must apply separately to the M.D. and the M.S.C.I. programs in the School of Medicine and be accepted by both programs to pursue the dual M.D./M.S.C.I. degree. Candidates should identify a qualified faculty member willing to serve as the candidate’s mentor prior to application to the M.S.C.I. program. The M.S.C.I. program director will provide assistance with selecting a qualified faculty mentor. Prior to matriculation in the M.S.C.I. program, the M.D./M.S.C.I. dual degree candidate must be in good academic and financial standing with Vanderbilt University School of Medicine.

The M.S.C.I. requires 35 academic credit hours of coursework, which includes a didactic core, as well as a mentored
research apprenticeship and a final project. The M.D. program’s Research Immersion Phase may be completed before matriculating in the M.S.C.I. program, and/or it may be integrated with the M.S.C.I. program’s requirements. Candidates should plan this time with input from both the M.D. and M.S.C.I. programs. Students in the dual M.D./M.S.C.I. program will have the opportunity to complete both degrees in five years.

Other Dual Degree Programs

M.P.H./M.Ed. (International Education Policy and Management)

Students interested in the M.P.H. program and the M.Ed. in International Education Policy and Management program will have the opportunity to complete both degrees in three years of study (seven academic terms).

Students must apply and be accepted separately to both the M.P.H. program in the School of Medicine and the M.Ed. program in Peabody College of Education and Human Development.

The M.P.H. degree requires 42 hours of academic credit which include didactic core and track-specific courses, as well as courses associated with the public health practicum and thesis. Dual degree students spend a minimum of three terms (fall, spring, and summer) focused on M.P.H. required course work. They typically complete 36 or more credit hours during these three terms. The summer term includes didactic courses in the month of May and the completion of the public health practicum.

M.P.H./M.A. (Latin American Studies)

Students interested in the M.P.H. program and M.A. in Latin American Studies program will have the opportunity to complete both degrees in three years of study (seven academic terms).

Students must apply and be accepted separately to both the M.P.H. program in the School of Medicine and the M.A. in Latin American Studies program in the Graduate School.

The M.P.H. degree requires 42 hours of academic credit which include didactic core and track-specific courses, as well as courses associated with the public health practicum and thesis. Dual degree students spend a minimum of three terms (fall, spring, and summer) focused on M.P.H. required course work. They typically complete 36 or more credit hours during these three terms. The summer term includes didactic courses in the month of May and the completion of the public health practicum.

Other Single Degree Programs in the School of Medicine

Note: A criminal background check is required of all students before matriculation.

Professional Programs in Hearing and Speech Sciences

Doctor of Audiology

The doctor of audiology (Au.D.) is a four-year post-baccalaureate degree which replaced the master of science degree as the requirement for the entry-level practitioner of audiology. The doctor of philosophy degree continues to be offered to students interested in becoming teacher/investigators.

Practicum sites include the Vanderbilt Bill Wilkerson Center, Odess Otolaryngology Clinic, Veterans Affairs Medical Center, and several hospitals and practices in the metropolitan Nashville area. At present, Vanderbilt’s Au.D. program is ranked #1 in the nation by U.S. News and World Report.

The Au.D. program encourages applicants with backgrounds in such areas as communication disorders and other health-related professions, biomedical sciences, psychology, and psychoacoustics. All students must possess GRE scores consistent with Vanderbilt standards, a strong record of past academic achievement, a commitment to hearing health care, excellent oral and written communication skills, a willingness to work collaboratively, a strong work ethic, perseverance, and strong organizational and time management skills.

The doctoral (Au.D.) degree program at Vanderbilt University is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Blvd., #310, Rockville, MD 20850, (800) 498-2071 or (301) 296-5700. Please visit our website at www2.mc.vanderbilt.edu/ghss/ for additional information.

Master of Education of the Deaf

The Department of Hearing and Speech Sciences (DHSS) offers a master of education of the deaf (M.D.E.) degree. This one- to two-year program emphasizes skills related to effectively planning and implementing specialized instruction. The DHSS is home to a unique, interdisciplinary approach to teacher training by combining training in audiology, speech-language pathology, and deaf education. The Mama Lere Hearing School in our National Center for Childhood Deafness and Family Communication serves as one of the professional development schools for the DHSS deaf education program. This auditory oral school for children who are deaf or hard of hearing is known for its outstanding work in the areas of speech development, auditory training, cochlear implant habilitation, language, and reading.

Students entering the Master of Education of the Deaf program are required to have an undergraduate degree in deaf education, special education, early childhood education, or general education and must have teacher certification in same. The program will be one year in length (three semesters including summer plus Maymester) for those coming in with a background in deaf education and two years (five semesters including summer plus Maymester) for those with no background in deaf education.

Please visit our website at www2.mc.vanderbilt.edu/ghss/ for additional information.

Master of Science (Speech-Language Pathology)

The master’s degree program in speech-language pathology (S.L.P.) is administered through the Vanderbilt University School of Medicine. The program provides clinical education leading to professional certification in speech-language pathology. The five- or six-semester program (depending on background) spans up to two calendar years of full-time study. Students without a background in communication disorders will require an extra semester. Many clinical opportunities are available throughout the program. The program culminates in a ten-week clinical externship. The program meets or exceeds American Speech-Language-Hearing Association requirements. Cochlear implant, autism, and
education courses are a part of the curriculum for students with interests in those areas. There is also a thesis option. At present, Vanderbilt’s M.S.-S.L.P. program is ranked #1 in the nation by U.S. News and World Report.

Students with backgrounds in such areas as communication disorders and other health-related professions, biomedical sciences, psychology, and linguistics are encouraged to apply. All students must possess GRE scores consistent with Vanderbilt’s standards, a strong record of past academic achievement, a commitment to perseverance, and exceptional organizational and time-management skills.

The master’s (M.S.) degree program in speech-language pathology at Vanderbilt University is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association, 2200 Research Blvd., #310, Rockville, MD 20850, (800) 498-2071 or (301) 296-5700.

Further information regarding graduate programs in hearing and speech sciences may be found online at ww2.mc.vanderbilt.edu/ghss/.

Professional Programs in Medical Physics

Doctorate in Medical Physics

Master of Science in Medical Physics

Medical physics is an applied branch of physics devoted to the application of concepts and methods from physics to the diagnosis and treatment of human disease. Medical physicists are concerned with three primary areas of activity: clinical service and consultation, research and development, and teaching. Clinically, medical physicists are called upon to contribute scientific advice and resources to solve physical problems arising in radiological medical physics. Medical physics research typically involves the development of new instrumentation and technology, the development of new medical diagnostic and therapeutic procedures, and tests using existing technologies. Historically, this type of activity has been primarily in radiological imaging and radiation oncology, but now has a growing breadth of involvement throughout medicine. Many medical physicists not only provide clinical service, but also have faculty appointments at universities and colleges and are responsible for teaching future medical physicists, resident physicians, medical students, and hospital technical staff.

Vanderbilt University offers a professional doctorate in medical physics (D.M.P.) and a master of science in medical physics (M.S.M.P.). Vanderbilt additionally offers a master of science in medical physics (M.S.M.P.) only in passing to D.M.P. students who successfully complete the requirements for the M.S.M.P. during the first two years of the D.M.P. program.

These interdisciplinary programs are administered through the Department of Radiation Oncology and the Department of Radiology and Radiological Sciences in the School of Medicine and involve faculty and courses from the Vanderbilt University School of Medicine, the Department of Radiology and Radiological Sciences, the Department of Radiation Oncology, the College of Arts and Science, the Department of Physics and Astronomy, and the School of Engineering (Department of Biomedical Engineering).

The D.M.P. program offers tracks in both radiotherapy medical physics and diagnostic medical physics. Degree requirements include 50 didactic credit hours, 6 research credit hours, and 36 hours of clinical training. The didactic hours are completed in years one and two, and the clinical training credit hours and the 6 research hours are completed in years three and four. The clinical medical physics experience gained in years three and four is equivalent to a two-year medical physics residency.

The M.S.M.P. program offers tracks in both radiotherapy medical physics and diagnostic medical physics. Students may select either a thesis option or non-thesis option. Degree requirements for the non-thesis option include 32 didactic credit hours and 6 credit hours of clinical practicum. Degree requirements for the thesis option include 32 didactic credit hours and six (6) independent study credit hours. The six independent study hours are required in order to successfully complete the M.S.M.P. thesis project.

All students and applicants may access this information and more online by visiting our webpages at https://medschool.vanderbilt.edu/dmp or https://medschool.vanderbilt.edu/mgm.

Other Programs

Master of Genetic Counseling

The Vanderbilt University Master of Genetic Counseling program has achieved candidacy for accreditation by the Accreditation Council for Genetic Counseling (ACGC) (gceducation.org). Achieving candidate status demonstrates progress towards accreditation. The MGC is currently under review by the ACGC for New Program status. Updates on the status of Vanderbilt accreditation by the ACGC may be found on the ACGC website and on the VUSM website at medschool.vanderbilt.edu/mgc.

The mission of the Master of Genetic Counseling (M.G.C.) program is to graduate genetic counselors who are leaders in the field of genetics and genomic medicine. The M.G.C. is a full-time, two year (five consecutive semesters) program. Students in the M.G.C. program enroll in coursework and clinical training to gain the knowledge and skills required to be successful genetics health professionals. Research skills are attained through a mentored research project that is publishable in a peer-reviewed journal.

The vision of the M.G.C. program is:

- Being on the forefront of genetics and genetic services research
- Creating a nurturing environment to foster genetic counseling training
- Nesting the program in a strong, connected academic and clinical community

The program goals are to:

- Matriculate diverse graduate students in genetic counseling who are empowered to succeed in the expanding field of genetics, genomics, and personalized medicine.
- Facilitate faculty and student collaboration with Vanderbilt researchers to enable significant contributions in the areas of genetics and genomics, genetic counseling, and personalized medicine.
- Improve access to genetic services by increasing the number of providers and expanding awareness about the field.

Graduates of the M.G.C. program will:

- Understand genetics and genomics and their application in medicine as set forth by the Accreditation Council for Genetic Counseling (ACGC) standards.
Admissions Match has been established to enhance the process that takes into account both applicants’ and programs’ preferences. The process of placing applicants into positions in masters-level genetic counseling programs that are accredited by the Accreditation Council for Genetic Counseling (ACGC). The Match uses a matching algorithm to determine the best match for each applicant based on their preferences and the programs’ needs.

In addition, candidates are highly encouraged to have had experiences that demonstrate an interest in and familiarity with the field of genetic counseling, as well as an ability to communicate clearly and compassionately with others. This experience could be obtained through volunteer work, employment, or observation in a clinical setting of a board-certified genetic counselor and/or medical geneticist.

The Vanderbilt Master of Genetic Counseling program is unable to accept international students at this time. Students who are permanent residents (green card holders) are eligible to apply for the Vanderbilt M.G.C.

Individuals for whom English is not their native language are required to provide scores from the Test of English as a Foreign Language (TOEFL), which is administered by the Educational Testing Service in Princeton, New Jersey. For information about this exam, go to ets.org/toefl/. The minimum acceptable score on the paper-based TOEFL is 570 and, for the Internet-based test, 88. The Vanderbilt Institution Code for TOEFL is 1871.

To apply for the Vanderbilt M.G.C. program, students will complete two separate steps:

1. Apply through the online Vanderbilt M.G.C. program application. Instructions will be available in fall 2018, at medschool.vanderbilt.edu/mgc.
2. Register with the Genetic Counseling (GC) Admissions Match through National Matching Services (NMS) at natmatch.com/gcadmissions/index.html.

Additional information about the NMS Match: The GC Admissions Match has been established to enhance the process of placing applicants into positions in masters-level genetic counseling programs that are accredited by the Accreditation Council for Genetic Counseling (ACGC). The Match uses a process that takes into account both applicants’ and programs’ preferences. All applicants must first register for the Match with NMS before applying to participating genetic counseling graduate programs. At the conclusion of all program interviews, both applicants and programs will submit ranked lists of preferred placements to NMS according to deadlines posted on the NMS website. The binding results of the Match will be released to both applicants and programs simultaneously in late April.

Please visit the NMS website at (natmatch.com/gcadmissions) to register for the match, review detailed information about the matching process, and view a demonstration of how the matching algorithm works.

Master of Laboratory Investigation

The mission of the Master of Laboratory Investigation program is to enhance the academic, scientific, and technical expertise of research personnel who will continue to work in a research environment; to foster their professional growth; and to improve the career potential of the brightest and most qualified researchers who do not wish to pursue a Ph.D.

The Master of Laboratory Investigation (M.L.I.) program is offered by the School of Medicine for Vanderbilt University, Vanderbilt University Medical Center, and Meharry staff members. Applicants should have B.S. or B.A. degree from an accredited institution with a GPA of 2.5 or higher, have at least six months of employment at VU, VUMC, or Meharry in a research laboratory, and be nominated with a strong letter of support from the faculty mentor in whose lab they work. The Graduate Record Examination (GRE— no minimum mandatory score) and an interview are required of all applicants.

Please visit our website at medschool.vanderbilt.edu/mli/ for additional information.

Master of Public Health

The Vanderbilt Master of Public Health (M.P.H.) is an interdisciplinary program to train research scientists and public health professionals to be leaders and innovators dedicated to improving public health. The M.P.H. program is a full-time, two-year (five semesters) degree program accredited by the Council on Education for Public Health (CEPH).

The small size of the M.P.H. program allows for flexibility and individualization. Students from all academic and professional backgrounds, as well as clinical specialties, are able to customize their public health education and integrate their specific research and career interests with the support of committed faculty mentors.

Upon application, students choose to focus their studies on one of the three track concentrations (epidemiology, global health, or health policy). Eligible candidates include those with bachelor’s, master’s, or doctoral degrees. At least two years of relevant, post-undergraduate professional experience is strongly preferred. Students in the M.P.H. program complete 42 academic credit hours of course work over five academic terms. The 42 academic credit hours include didactic core and track-specific courses, as well as courses associated with the public health practicum and thesis. See the Academic Policies for Other School of Medicine Degrees section in this catalog for more program information.

Additional information about the Vanderbilt M.P.H. program can be found at medschool.vanderbilt.edu/mph.

Master of Science in Applied Clinical Informatics

The Department of Biomedical Informatics (DBMI) at Vanderbilt University offers a two-year M.S. in Applied Clinical Informatics (M.S.A.C.I.) degree program. The objective
of the program is to provide innovative clinical informatics education for working professionals in the health care field, with graduates assuming leadership roles in the application and innovation of clinical informatics nationally.

At many institutions, the role of clinical informatics (CI) leaders (known as clinical informaticians) has evolved from introducing electronic health records (EHRs) and practice transformation techniques to the effective evaluation and improvement of patient outcomes. Increasingly, local improvements must be integrated into accountable care organizations, clinically integrated networks, and other inter-organization collaborations that emphasize both quality improvement and cost reduction. These factors create a profound need for trained informatics professionals from a variety of clinical and nonclinical disciplines who share a deep theoretical and practical understanding of the care process, informatics concepts, and the changing social, organizational, and economic context in which health care is delivered.

Vanderbilt’s M.S. in Applied Clinical Informatics is designed to develop leaders who are prepared to advance the science and practice of clinical informatics.

The M.S.A.C.I. program is designed for clinicians who desire rigorous, practical informatics training (e.g., board-certified and non-boarded physicians, nurses, pharmacists) and professionals from a wide range of disciplines (e.g., information technology, public health, health care policy, business management, research informatics) who contribute and collaborate to promote safe, efficient, and effective health care.

**Application Requirements.** Applicants must hold a bachelor, master, or doctoral degree. At least two years of relevant, post-undergraduate professional experience, education, or training is strongly preferred. GRE, MCAT, or other pre-professional equivalent test scores are required. TOEFL exam is required for applicants whose primary language is not English.

Physician applicants who intend to apply for ABMS certification in Clinical Informatics must have a) graduated from an appropriately licensed medical school located in the United States or Canada, or from a school located elsewhere that is approved by the ABPM; and b) successfully completed a residency in an ABMS-participating specialty by June 2015, and must be either board-certified or board-eligible at that time.

Applicants are not required to have formal training in Computer Science or a related discipline, but they need to demonstrate a strong interest and aptitude in Clinical Informatics. Students without a computational background are encouraged to take at least one introductory-level course in computer science before entering the program.

**Master of Science in Clinical Investigation**

The Master of Science in Clinical Investigation (M.S.C.I.) program trains investigators in the techniques and processes used in patient-oriented research. This program provides direct, mentored experience in clinical and translational investigation and, through didactic work, provides trainees with a strong foundation in study design, biostatistics, biomedical ethics, human genetics, drug and device development, and genomics. The program typically takes two years to complete. Graduates successfully compete for grants such as the K23, VA Career Development Award, R01, and major foundation grants.

Eligible candidates for the M.S.C.I. program include:

- board-eligible physicians enrolled in a fellowship program at Vanderbilt or Meharry Medical College
- Vanderbilt or Meharry residents with protected time for research
- Vanderbilt faculty members with the consent of their department chairs
- Vanderbilt M.D. students after the completion of the first three years of medical education
- postdoctoral Ph.D’s anticipating a career in patient-oriented research, and
- Ph.D. candidates in the Nursing School anticipating a career in patient-oriented research.

The M.S.C.I. program consists of four components:

**Mentored Research Apprenticeship:** The core of the M.S.C.I. program will be the completion of a mentored research project. The research must be patient-oriented and involve direct measurements on patient-derived samples or the use of investigational therapeutic or diagnostic techniques. The mentor must be an established physician-scientist with experience in patient-oriented research. Use of the Vanderbilt University Clinical Research Center will be encouraged. The research project will account for 80 percent of the candidate’s commitment to the program.

**Didactic Work:** Candidates must complete 35 credit hours of courses covering the essentials of study design, biostatistics, ethics, drug development, and data analysis. It is expected that course work will comprise 20 percent of the candidate’s time commitment. Core courses will be provided in two formats: intense courses that meet three hours each day (e.g., 8:00 a.m. to 11:00 a.m.) for four weeks and courses that can be offered less intensively (two to four hours a week for several months). The course schedule is designed to maximize protected time for patient-oriented research.

**Career Path Development:** In addition to the formal curriculum, a monthly seminar series, “Clinical Scientist Career Seminars,” will permit candidates to meet successful patient-oriented researchers. Topics of discussion will include academic “rules of the road,” time management, promotion tenure issues, grants management, and authorship. Candidates will hone their scientific communication skills through an annual presentation at the MSCI Case Studies forum. The directors will host networking events with the candidates, clinical investigators, mentors, and visiting scientists.

**Master’s Final Project:** The candidate will submit a manuscript to a peer-reviewed journal, provide a completed proposal for a federal or major foundation grant, or develop a master’s thesis based on his or her research project. Completion of the thesis requirement will be evaluated by the M.S.C.I. Promotion Committee.

More information is available online at medschool.vanderbilt.edu/msci/.

**Visiting Students (General Information)**

Vanderbilt School of Medicine welcomes visiting senior medical students, space permitting, into clinical electives. The visitor must be an enrolled fourth-year medical student in good academic standing at a U.S. medical school. Each approved student must be taking the elective for credit from his/her own school with his/her dean’s approval and must have adequate professional liability and health insurance coverage. In addition, the visitor must submit immunization records which will be reviewed by Vanderbilt University Student Health services. The visitor must be deemed compliant by Student Health before being cleared to rotate in a clinical setting. In addition,
the visitor must show proof of a criminal background check conducted within 12 months of the rotation. Visitors must also have taken and passed the NBME Step 1 exam.

Visiting students may take ACE electives in the School of Medicine, space permitting, with the approval of the appropriate department and with concurrence of the course instructor and the associate dean for medical student affairs. Visiting students should not contact the course directors directly. All inquiries must be made through the Office of Enrollment Services. Failure to apply through this office may result in the student’s not being able to take the course.

Students wishing to visit at Vanderbilt School of Medicine should submit a Visiting Student Application through the AAMC Visiting Student Application Service (VSAS). Applications will be processed up to twelve weeks in advance of the requested rotation. For more information on VSAS, visit aamc.org/vsas or contact vsas@aamc.org. Applications are accepted beginning on March 15. A complete application includes a picture, CV, USMLE Step 1 Score, transcript, immunization form, and federal criminal background check report. All accepted students must confirm their participation by submitting a non-refundable $160 processing fee by check or money order payable to Vanderbilt University School of Medicine. Visitors may not enroll for more than eight weeks of elective work at Vanderbilt without special approval. Complete information about the Visiting Student Program is online at medschool.vanderbilt.edu/enrollment/visitingmed.

Meharry Medical Students
The Vanderbilt School of Medicine has an alliance with Meharry Medical College which allows Meharry medical students to take electives at Vanderbilt, space permitting, at no additional cost. Applications must be submitted through the VSAS application program in the same manner as for other medical students (outlined above).

Osteopathic Students
Students from osteopathic medical schools may apply to Vanderbilt University School of Medicine through VSAS. The same process applies as for medical students (outlined above). Osteopathic students are also required to submit a non-refundable processing fee of $160 upon approval and placement in an elective course. Not all specialties at Vanderbilt University School of Medicine accept osteopathic students.

International Visiting Students
Vanderbilt School of Medicine accepts a finite number of international visiting medical students during November through April each year. International students are eligible for this program if:

- There are available spaces in existing courses;
- The student is in his or her final year of medical school;
- The student demonstrates proficiency in English as evidenced by the TOEFL score or has been taught in English;
- The student has been nominated by an institution with whom Vanderbilt has an existing collaboration or by a clinical faculty member at Vanderbilt who already has a professional relationship with the student.

International visiting students must pay a $250 registration fee and $750 per elective. The elective fee is waived for students at the University of Jordan with which Vanderbilt has a reciprocal relationship.

Information on the program is on the website at medschool.vanderbilt.edu/enrollment/international-students.

An affiliation agreement must be signed and in place before any domestic or international visiting student may rotate at Vanderbilt. Vanderbilt University School of Medicine has signed on to the AAMC Universal Clinical Training Agreement (UCTA) that was endorsed by the Liaison Committee on Medical Education (LCME). As a participant in this medical school registry, Vanderbilt requires only an implementation letter for any school that has signed on to the UCTA.

Technical Standards
All candidates for admission must possess sufficient intelligence, integrity, and personal and emotional characteristics with or without reasonable accommodations to meet the academic requirements of the respective School of Medicine program without fundamental alteration in the nature of the program. Requests for disability-related reasonable accommodation should be made to Vanderbilt University Student Access Services (SAS). The senior associate dean for health sciences education, the admission committee for the applicable degree program, and Vanderbilt University SAS are responsible for interpreting these technical standards as they may apply to an individual applicant to the School of Medicine, as well as to any enrolled student. In addition, the School of Medicine interprets and implements these standards consistently with any applicable federal and state law.
Academic Programs and Policies for the Doctor of Medicine

Competencies for Learners across the Continuum

The following set of core competencies was adopted by the Undergraduate Medical Education Committee in 2009 and updated in July 2012. These competencies represent goals for medical education across the continuum, and while it is expected that students will be able to demonstrate some degree of mastery in all of them by the time of graduation, it is not expected that all graduating students will be expert in all of them. These core competencies are based on the six ACGME competencies that guide learning throughout postgraduate medical education.

I. Medical Knowledge

Physicians must understand established and evolving biological, clinical, epidemiological and social-behavioral sciences and must be able to apply this knowledge to patient care. Learners will be able to:

- MK1. Explain the biological, behavioral and social factors that promote health or predispose individuals to illness, and how these may be used in partnership with patients to predict, prevent or mitigate the onset of disease.
- MK2. Demonstrate deep knowledge of the sciences essential for one’s chosen field of practice.
- MK3. Demonstrate knowledge of the sciences that support other specialty fields as they relate to one’s own practice.
- MK4. Demonstrate knowledge of the sciences underlying the common and important health and wellness issues affecting our society and other societies around the globe.
- MK5. Demonstrate an appreciation for the importance of the sciences that underlie the effective practice of medicine and the resulting commitment to maintain an up-to-date fund of knowledge through continuous learning.
- MK6. Apply knowledge of the scientific method, reproducible research, and experimental design in evaluating questions of interest.
- MK7. Collect, analyze, and interpret new information to enhance knowledge in the various disciplines related to medicine.

II. Patient Care

Physicians must consistently provide care that is compassionate, culturally competent, safe, efficient, cost sensitive, appropriate, and effective for the treatment of illness and the promotion of health. Learners will be able to:

- PC1. Perform a problem-focused or complete history and physical examination as indicated, and to obtain necessary diagnostic studies, including imaging, laboratory and procedural tests.
- PC2. Interpret clinical information and formulate a prioritized differential diagnosis that reflects the use of medical knowledge in a probabilistic reasoning process.
- PC3. Formulate a management plan based on evaluation of the scientific evidence as well as on the patient’s values, cultural background, beliefs and behaviors; critically review the literature with an understanding of the levels of evidence provided by typical experimental or study designs, measurement techniques, and analyses; recognize common forms of bias.
- PC4. Implement a comprehensive management plan that would include performing indicated procedures within the scope of one’s training.
- PC5. Utilize knowledge support tools such as evidence-based diagnostic criteria, management guidelines and point-of-care information resources.
- PC6. Utilize informatics and health information technology in support of patient care in a manner that reflects understanding of their capabilities, limitations, benefits, and risks. Examples include the electronic health record, computerized physician order entry, decision support systems and messaging systems.
- PC7. Demonstrate clinical judgment that is safe and commensurate for the level of training.
- PC8. Re-examine and address prior decisions when desired outcomes are not achieved and/or the patient is dissatisfied.

III. Interpersonal and Communication Skills

Physicians must be able to communicate in ways that result in safe, culturally sensitive, effective and respectful information exchange and create beneficial partnerships with patients, their families, and other health professionals. Learners will be able to:

- ICS1. Discuss the enduring value of effective relationships and the factors that can facilitate or impede their formation, including power imbalances and social, economic, and cultural differences.
- ICS2. Demonstrate sensitivity to the diversity with which people perceive, think, learn, communicate, and make decisions, both individually and in groups, and an understanding of how these processes might be impacted by illness.
- ICS3. Explain the elements of a validated provider-patient communication model, and demonstrate appropriate components of the model during patient interactions.
- ICS4. Discuss the strengths, limitations and appropriate applications of various communication modalities, and utilize verbal, non-verbal, written, electronic, graphic, synchronous, and asynchronous modalities in appropriate ways.
- ICS5. Discuss the challenges and opportunities created by cross-cultural communications and their potential impact on patient care, health disparities and health outcomes, and engage support systems that facilitate cross-cultural communication.
- ICS6. Discuss the elements of effective team building and utilize appropriate techniques to create, participate in, and lead effective teams.
- ICS7. Establish and utilize effective communication strategies with patients, families, and healthcare colleagues, regardless of their cultural background.
• ICS8. Build and sustain effective relationships in a wide variety of settings and with persons from diverse backgrounds.
• ICS9. Effectively manage interpersonal conflict and provide and receive constructive feedback.
• ICS10. Disclose medical error to patients, families and health care providers in a manner that is truthful, sensitive, responsible, constructive and supportive.

IV. Professionalism

Physicians must possess the knowledge, skills and attitudes necessary to carry out professional responsibilities, adhere to ethical standards and establish and maintain productive, respectful relationships with patients and colleagues. Professionalism applies to formal and informal interactions in education systems, in health care practice settings, and in the wider community. Learners will be able to:

• PR1. Discuss the duties and obligations of the medical profession, its health care institutions and its individual practitioners to patients, communities and society.
• PR2. Place the primacy of the patient in all health care endeavors.
• PR3. Work for a more just health care system, including the ability to advocate effectively on behalf of individual patients and patient populations.
• PR4. Discuss the principles of biomedical ethics and apply these principles in practical contexts.
• PR5. Demonstrate honesty and transparency in all dealings with patients, learners, and colleagues.
• PR6. Comply with the professional and legal standards that safeguard patient confidentiality.
• PR7. Discuss the concepts surrounding conflict of interest and competing priorities; identify and manage these in ways that maintain the primacy of patient interests and the health of the public.
• PR8. Demonstrate compassion and respect for all persons regardless of differences in values, beliefs and experiences.
• PR9. Demonstrate awareness of the vulnerability of patients and the inherent power differentials in organizational and interpersonal relationships, and respect the boundaries that define therapeutic relationships.
• PR10. Seek excellence in all professional endeavors.

V. Practice-Based Learning and Improvement

Physicians must be able to continuously improve patient care by investigating and evaluating outcomes of care and by engaging in learning activities which involve critical appraisal and assimilation of scientific evidence and application of relevant knowledge to individual patients and populations. To demonstrate competence in practice-based learning and improvement, each learner will be able to:

• PBLI1. Systematically collect, monitor, and analyze data describing current performance at the individual, team and/or systems levels in an effort to achieve the highest possible quality of care.
• PBLI2. Continuously pursue knowledge regarding best practices and optimal patient outcomes.
• PBLI3. Compare data about current performance at the individual, team, and/or systems level with expected outcomes, and identify and implement the learning strategies needed to improve performance.
• PBLI4. Develop and implement improvement projects using a systematic approach that employs the principles of improvement science.
• PBLI5. Recognize, acknowledge and analyze medical errors and devise system-based strategies that would prevent similar errors in the future.

VI. Systems-Based Practice

Physicians must understand and respond to the larger context and system of health care and effectively call on system resources to provide care that is of optimal value. Learners will be able to:

• SBP1. Explain why health care of optimal value is safe, effective, patient-centered, culturally sensitive, timely, efficient, and equitable.
• SBP2. Explain basic principles of systems science and the ways in which people, processes, technology and policy combine to form systems.
• SBP3. Describe the basic organization of health care systems, including the various relationships between patients, providers, practices, institutions, insurers and benefits managers, community health organizations, federal and state regulators, accrediting bodies, professional organizations, licensing boards, the pharmaceutical and biotechnology industries, and legislators.
• SBP4. Compare and contrast the local systems in which acute patient care and health maintenance are provided, such as emergency departments, outpatient clinics, hospitals, mental health clinics, public health clinics, pharmacies, etc.; coordinate patient care within these systems.
• SBP5. Describe different health professionals’ roles and responsibilities within the health care delivery system and maximally utilize the capabilities of all health care team members to achieve optimal patient outcomes.
• SBP6. Discuss the key elements of leadership, management and organizational behavior and how these elements apply in teams, health care organizations, and society; demonstrate these in one’s own leadership roles.
• SBP7. Describe how public health and health policy shape the nature of our health care system and discuss how and when clinicians must interact with public health officials and policymakers.
• SBP8. Explain risk, complexity, resilience and related concepts that influence the performance of humans and the systems in which they work.

VUSM Compact Between Teachers and Learners in Medicine

Preamble

As a community of teachers, learners, physicians, and physicians-in-training, we acknowledge the fundamental importance of our professional values in creating and maintaining an environment that promotes the highest standard of learning and the highest quality of patient care. The following principles characterize this environment and guide us in making daily decisions: Respect, Service, Integrity, Accountability, Scholarship, and Compassion. Recognizing that in an academic community we are teachers and learners simultaneously, we make the following
commitments with the understanding that each applies to all of us, regardless of our status as faculty, resident, or student.

Commitments of Teachers

- We will respect students, colleagues, staff and patients as individuals.‡
- We will strive to provide the highest quality instruction, by preparing adequately for all teaching sessions, using evidence-based content, arriving on time, and admitting any gaps in knowledge. We will strive for continuous improvement in our teaching efforts by responding to feedback and evaluation.
- We will demonstrate respect for our learners by turning off cell phones and silencing pagers during sessions we teach, unless they are required for service responsibilities.
- We will clearly express learning objectives for all courses and teaching sessions, and understand how these promote the learning objectives of the school. We will clearly define any specific academic and behavioral expectations for our classes.
- We will be aware of institutional and national policies, such as duty hours, and make sure that our expectations are consistent with those policies.
- We will assign tasks that are appropriate for stage of learning, level of responsibility, and status as students. If an assigned task conflicts with the personal ethics of a learner, we will discuss this with the student and attempt to resolve the conflict in a manner that respects the student while placing priority on the interests and well-being of the patient. We will seek not to require our learners to take actions inconsistent with their personal values.
- We will recognize the responsibilities implicit in our roles as mentors and coaches, and in the spirit of cultivating excellence in our learners, provide timely and constructive feedback.
- We will recognize our status as role models, and in our interactions with patients, staff, students, and colleagues, we will exhibit the same standard of professional behavior that we expect from others.
- We acknowledge that the teacher-learner relationship is a model for the doctor-patient relationship, and will strive to know our students as individuals, answer their questions promptly, exercise concern for their well-being, and treat them with compassion.
- We will respect the intellectual property of others and will use online resources, such as VSTAR, in a manner that is consistent with that respect.
- We will demonstrate honesty and integrity in all academic endeavors, including examinations, research efforts, and patient care entries.
- We will strive to create a culture of safety. We will accept responsibility for errors and near-errors by disclosing them, analyzing them and implementing changes that would prevent similar events in the future.
- In the spirit of continuous quality improvement, we will accept the responsibility of constructive evaluation of our courses and teachers.

Commitments of Learners

- We will respect students, colleagues, staff, and patients as individuals.‡
- We will strive for excellence in attaining the knowledge, attitudes, and skills needed for the highest standard of patient care.
- We will attend all learning sessions designated as required by our teachers, which will include all patient presentations and small group sessions. We will demonstrate respect towards teachers and peers by arriving on time, turning off cell phones, silencing pagers, and complying with other specific expectations defined by the faculty.
- We will wear appropriate attire. In the classroom setting, it should not cause distraction and in the presence of patients, whether in classroom or clinical settings, it should comply with patient expectations and the standards published by the institution.†
- We will work effectively in teams, respecting the contributions of all members, assuming a fair share of responsibility, and performing leadership tasks with a sense of service to others.
- We will acknowledge and seek help when an assigned clinical task is beyond our level of skill. If an assigned task conflicts with personal ethics, we will discuss this with the supervising physician and strive to reach a resolution that places priority on the interests of the patient.
- We will recognize our obligations as a collegial community, sharing knowledge and assisting peers in their quest to achieve professional and personal goals. We will assist our colleagues in distress.
- We will establish the habit of critical reflection, acknowledge gaps in our knowledge, recognize our limitations, and strive for constant self-improvement.
- We will respect the intellectual property of others and will use online resources, such as VSTAR, in a manner that is consistent with that respect.
- We will demonstrate honesty and integrity in all academic endeavors, including examinations, research efforts and patient care entries.
- We will strive to create a culture of safety. We will accept responsibility for errors and near-errors by disclosing them, analyzing them and implementing changes that would prevent similar events in the future.
- In the spirit of continuous quality improvement, we will accept the responsibility of constructive evaluation of our courses and teachers.

Acknowledgements

This document draws heavily from the following sources:

1. Association of American Medical Colleges, Compact Between Teachers and Learners of Medicine.
2. National Board of Medical Examiners, Center for Innovation, The Behaviors of Professionalism.

† In compliance with federal law, including the provisions of Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendment of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, the ADA Amendments Act of 2008, Executive Order 11246, the Vietnam Era Veterans Readjustment Assistance Act of 1974 as amended by the Jobs for Veterans Act, the Uniformed Services Employment and Reemployment Rights Act, as amended, and the Genetic Information Nondiscrimination Act of 2008, Vanderbilt University does not discriminate against individuals on the basis of their race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability, military service, covered veterans status, or genetic information in its administration of educational policies, programs, or activities; admissions policies; scholarship and loan programs; athletic or other university-administered programs; or employment. In addition, the university does not discriminate against individuals on the basis of their gender expression consistent with the university’s
Student Compliance Requirements

All Vanderbilt University School of Medicine students are required to take steps to ensure they are in compliance with the rules and regulations that govern medical student education. Many of these steps are completed on a recurring basis throughout a student's VUSM career. Students are contacted at appropriate intervals to make them aware of their responsibilities to meet these requirements and to notify them about the process for doing so. Specific requirements vary by degree program. Failure to complete the requirement by the stated deadlines results in the student’s removal from educational activities.

Degree Requirements for the Doctor of Medicine

In accordance with the requirements of the Liaison Committee on Medical Education, candidates for the M.D. must have spent at least 130 weeks of study as matriculated medical students. The maximum time for enrollment in required M.D. course work is six years, including time spent on approved personal and/or medical leave(s) of absence. Time spent on leave of absence related to an approved alternate academic pathway (e.g., pursuing another degree, completing a research year, etc.) does not count toward the six-year maximum time to complete the M.D.* In order to graduate with the doctor of medicine, all M.D. students must:

• Have satisfactorily completed the medical curriculum.
• Have attained or acquired all required programmatic competencies. Have taken Step 1, Step 2 Clinical Knowledge (CK) and Step 2 Clinical Skills (CS) of the United States Medical Licensing Examination by the following deadlines: waivers must be approved by ADMSA or ADUME
  o Have taken Step 1 prior to orientation week of the Immersion phase.
  o Have taken Step 2CK and Step 2CS by February 1 of their 4th year/final year of medical school.
• Have no outstanding unpaid balances with the university, other than sanctioned educational loans.

PHASE-SPECIFIC REQUIREMENTS

Foundations of Medical Knowledge Phase (FMK)

This phase of the curriculum (54 weeks) provides students a strong foundation in the basic sciences, humanities, and behavioral and social sciences that will support ongoing developmental learning over ensuing years. All students participate in meaningful clinical work during this phase to initiate their development as professionals, to provide clinical relevance for the foundational course work, and to provide an early understanding of health care systems.

Required courses include Foundations of the Profession; Human Blueprint and Architecture (HBA); Microbes and Immunity (MI); Homeostasis; Endocrine, Digestion and Reproduction (EDR); Brain, Behavior and Movement (BBM); Physical Diagnosis (PDx); Learning Communities (LC)—FMK; CASE (Inquiry Program); and Continuity Clinical Experience (CCX) for either Foundations of Healthcare Delivery (FHD) or Vanderbilt Program in Interprofessional Learning (VPIL) track.

Foundations of Clinical Care Phase (FCC)

This phase (41 weeks) provides a strong foundation in clinical care delivery, including core clerkships, clinical electives, and longitudinal programs to support the development of clinical skills and clinical reasoning.

Clerkships. Students rotate through discipline-specific clinical clerkships including Surgery (8 weeks), Medicine (8 weeks), Pediatrics (6 weeks), Obstetrics-Gynecology (6 weeks), Neurology (4 weeks), and Psychiatry (4 weeks).

Ordinarily students will complete all clerkships before proceeding to the Immersion phase, but under special circumstances, students may defer one or more clerkships to pursue specific research or clinical interests. Such plans must be approved by the associate dean for undergraduate medical education. MSTP students who enter the FCC phase after the first clerkship block may defer one block to the Immersion phase, with the permission of the Medical Scientist Training Program (MSTP) program director and the associate dean for undergraduate medical education (ADUME). These students remain accountable for the longitudinal elements of the FCC phase.

Electives. All students are required to take two (2) two-week electives during the FCC phase. These experiences are designed to allow students to explore focused clinical areas and potential career choices. Students may select from offerings across many clinical disciplines. The scheduling of these electives is linked to the clerkship blocks in Pediatrics and in Obstetrics and Gynecology, with the elective immediately following the core clerkship.

A student may request an exemption from the elective requirement if she/he has a compelling reason. Reasons may include a need to make up clerkship time, illness requiring treatment, or other unavoidable life events that require the student to be away from school. When the student needs an exemption, she/he must contact the associate dean for medical student affairs (ADMSA) to make a formal request. The decision to grant the exemption is made by the ADMSA. Once an exemption is granted, the student is not required to complete the elective at a later date. The exempted elective will not appear on the transcript.

Master Clinical Teacher (MCT) Program. Direct observations by a master clinical teacher are required during the FCC phase. MCTs observe students during patient encounters and provide immediate feedback and teaching of advanced clinical skills. The structure and expectations of the observations are
consistent throughout the phase; however the logistics and scheduling of observations are specific to each clerkship. Participation in the MCT process is mandatory and contributes to the clerkship grade and portfolio.

*Diagnosis and Therapeutics (De-T)*. This required course runs longitudinally throughout the phase. The course begins with a one-week intensive review of diagnostic approaches and continues throughout the FCC phase with a series of small group meetings aligned with specific clerkships.

The longitudinal elements (Foundations of Healthcare Delivery and, if participating, Vanderbilt Program in Interprofessional Learning, Learning Communities—FCC, Research and Vanderbilt Clinical Core Curriculum VC3) continue during the FCC phase. For ease of scheduling, these activities have been aggregated to “longitudinal days.” All activities during longitudinal days are considered mandatory.

**Immersion Phase (22 months)**

The Immersion phase is a highly individualized experience that allows each student to create a schedule that optimally meets core educational needs, strengthens all competency domains, and builds specialized skill sets aligned with the student’s future clinical and scholarly trajectory. Students are required to complete 15 one-month blocks over this 22-month period (including the Research Immersion, described below). Students complete a mixture of experiences with varying levels of structured versus work place learning, including acting internships (AIs), integrated science courses (ISCs), advanced clinical experiences (ACEs), and electives. Requirements for experiences across various care settings (primary care, acute care) and clinical disciplines ensure a broad preparation.

Because the Immersion phase is intended to be individualized, each student must develop a personalized learning plan that is approved by his/her portfolio coach as meeting core requirements. Refer to the School of Medicine website for a full description of the requirements of the Immersion phase (medschool.vanderbilt.edu/ume/IP).

The longitudinal elements (Foundations of Healthcare Delivery, Learning Communities, and VC3) continue during the Immersion phase. Some of this longitudinal course work is completed while participating in other core rotations. Some content is delivered in week-long courses, in which an entire class of students physically convenes. All activities during week-long courses are mandatory.

The Research Immersion, an intensive 3-month mentored scholarly experience, must be completed during the Immersion phase. Each mentor works with a student, aligning resources to support the student’s project during their planned research months. Once the research months are determined, these agreed-upon months may not be shifted or adjusted as this jeopardizes the project by impacting the effort faculty have made to align said resources. Students must complete the PLAN course before beginning the Research Immersion. Students may request an extension of the Research Immersion of up to a total of six months (as a contiguous or non-contiguous block); approval is contingent upon satisfactory progress across all competency domains and will be granted by the Inquiry Program director. Students must complete (or have attained waivers for) all Research Immersion requirements before April (by the end of block #3) of the intended year of graduation.

**LONGITUDINAL REQUIREMENTS**

Several curricular elements span all phases of the four years of training.

*Foundations of Health Care Delivery (FHD)*

FHD is a longitudinal four-year course which embeds students into care delivery systems to:

- Prepare professionals with systems level skills necessary to provide care that is safe, effective, patient-centered, timely, efficient, and equitable
- Integrate health systems science with clinical care
- Cultivate respectful professionals

The vision of the course is to offer students a longitudinal experience in which they learn about the systems of health care as well as foundational skills that help them better understand how health systems function, while at the same time gaining important skills to function in and eventually modify those systems. Graduation requirements are detailed at https://medschool.vanderbilt.edu/fhd/

*Vanderbilt Program in Interprofessional Learning (VPIL)*

Students have the opportunity to apply for VPIL, a two-year course in which medical, nursing, pharmacy, and social work students work and learn together as a team in a clinical environment. Participation in VPIL allows medical students to fulfill a portion of their FHD requirements for graduation.

The goals of the program include:

- Cultivate respectful professionals
- Nurture self-directed workplace learners
- Prepare leaders who contribute to a collaborative practice-ready workforce
- Integrate the patient care experience with health professions knowledge
- Improve the health care delivery system by integrating systems knowledge with patient care

Student teams learn to provide care to a panel of patients under the supervision of multi-professional attending providers. Teams also meet regularly for a variety of classroom-based and simulation activities focused on social determinants of health. Teams discuss cases together, go on a home visit, and learn a variety of other clinic-based skills that they can accomplish as a team. In their second year, student teams will design and implement a quality improvement project in their clinic and present it at an end of year Capstone event.

Graduation requirements for students accepted into VPIL are detailed at https://medschool.vanderbilt.edu/vpil/

*Learning Communities*

Learning Communities course work capitalizes on strong relationships within the Colleges, utilizing small group formats to address key elements of professional development. The Learning Communities curriculum includes meta-cognition, medical ethics, medical humanities, health care policy, and narrative medicine, delivered in a discussion-based format. Leadership is also a focus of the Learning Communities curriculum.

*Inquiry Program*

Research and scholarship are addressed over a four-year curriculum that introduces students to the role of physician-researcher
and provides education in the skills, knowledge, and attitudes required to succeed in that role. The Inquiry Program consists of the following components:

- **FMK Phase:** CASE (Clinical Applications of Scientific Evidence)
- **FCC Phase:** Discovery
- **Immersion Phase:** PLAN (Planning, Logistics, and Navigation) and Research Immersion

The research courses in FMK and FCC phases prepare each student to complete a Research Immersion of 3–6 months during the Immersion phase.

**Vanderbilt Core Clinical Curriculum (VC3)**

The Vanderbilt Core Clinical Curriculum (VC3) is based upon a set of 25 common presenting complaints. These topics do not encompass all that each student is expected to learn, but do represent core clinical problems that all graduates are expected to know. A set of learning objectives is established for each presenting problem. The VC3 topics are introduced in the FMK phase and continually revisited throughout the curriculum. Students are expected to populate a digital dashboard demonstrating experience with these topics throughout their clinical rotations.

**Core Entrustable Professional Activities for Entering Residency (Core EPAs)**

The AAMC has defined 13 tasks that interns are expected to perform without direct supervision. Training in the Core EPAs is provided throughout the curriculum, and students are assessed throughout FCC and the Immersion Phase. Although proficiency in all thirteen tasks is not a requirement for graduation, progress in the Core EPAs is monitored as part of each student's overall competency development. "Core EPA week," occurring in the spring semester of the third year, includes didactic and simulation activities to support student readiness for residency. This event is mandatory.

**Special Doctor of Medicine Program Requirements**

**Medical Innovators Development Program (MIDP)**

In addition to the graduation requirements for the M.D., the MIDP requires completion of the following elements:

1. **Mentorship**

   MIDP Forum provides all MIDP students a shared experience offering social and academic support throughout their career in the medical school. The forum is a non-graded seminar course that is interdisciplinary in scope, drawing its topics from the three MIDP topic areas (imaging, biomedical informatics and systems, and medical devices). Invited speakers from academia, industry, and regulatory agencies, and entrepreneurs share their expertise in the Forum, and a Forum adviser provides mentorship.

   **Topic-area mentorship.** During the first two years, each student will be assigned a faculty mentor from the student’s primary topic area (i.e., imaging, biomedical informatics and systems, or medical devices). The goal of faculty mentorship is to provide students with a focused sponsor who helps the student navigate the topic area, address any specific challenge areas, and identify resources the student can leverage to advance their topic-specific educational program. The mentorship is expected to continue throughout the M.D. program.

2. **Service and Innovation Experience**

   First-year students may take a domestic or international week-long trip in order to develop design skills related to innovation in culturally or socio-economically diverse environments. Students will prepare with training from engineering design experts incorporated into the Forum lectures. The potential deliverable from this experience is project definition for development in the Innovation Design Experience and Application (IDEA) Lab.

3. **Innovation Activism—Second Year Course**

   The Innovation Activism course runs concurrently with the clinical clerkships during the second year. Students will learn engineering processes for observing and listening to the voice of the clinical customer, and identifying their unmet needs. At the conclusion of the clerkship phase, each student will have described several clinical problem statements for future development in the laboratory in years three and four. Students will be guided through this process by engineering and clinical faculty.

4. **Innovation Design Experience and Application Lab—12 Weeks in Third Year**

   The goal of the IDEA Laboratory is to provide trainees with a real-world experience designing a translational solution to an unmet problem in health or health care. Students will form teams to address one or more of the problems identified in their clinical clerkships through the Innovation Activism course. They will have regular meetings with Vanderbilt faculty and, if appropriate, industry advisers. A major emphasis will be to propose practical solutions by leveraging the multidisciplinary expertise of team members and advisors.

5. **Immersion Phase Courses for Training in Business and Entrepreneurship**

   To become successful applied physician-scientists, students in this program will require focused knowledge about a) the FDA approval process for medical devices; b) entrepreneurship and business concepts; and c) issues related to intellectual property, health policy and global health. To address these needs, two courses will be offered to third- and fourth-year MIDP students during the Immersion Phase.

6. **Internship**

   Each student will have the opportunity to take part in an internship with an industry partner. This engagement will focus on the application, extension, and synthesis of the track into a concrete innovation that has clinical and market value. The choice of industry partner will depend upon the track, experience, and intent of the student. The intended deliverables of this engagement are both a product/innovation/device/novel process and the business model and valuation to support it.

7. **Existing courses within the M.D. curriculum**

   To provide requisite training in imaging, medical devices, and informatics, students are encouraged to pursue relevant course work in the M.D. curriculum, as well as other graduate-level courses in other schools at Vanderbilt University.

**Oral and Maxillofacial Surgery-Doctor of Medicine Program (OMS-MD)**

Students in the OMS-MD program meet in full the requirements for the doctor of medicine after three years of full-time training. OMS-MD trainees complete all requirements of
the Foundations of Medical Knowledge (FMK) phase and Foundations of Clinical Care (FCC) phase as full-time medical students. By virtue of the immersive nature of the OMS residency program and the advanced standing of the OMS-MD student, the graduation requirements for the Immersion phase of the M.D. curriculum can be completed in a third, final year of the M.D. degree program. OMS-MD students complete eight four-week rotations during the Immersion phase of their M.D. training to satisfy the Immersion phase graduation requirements, which include:

- 1 four-week rotation in Primary Care
- 1 four-week rotation in Emergency Medicine
- 6 four-week rotations in Oral and Maxillofacial Surgery and Anesthesia

Consistent with traditional M.D. graduation requirements, OMS-MD students are also required to complete Step 1 and Step 2 CS and CK examination requirements prior to graduation.

Medical Scientist Training Program (MSTP)

Annual Retreat. The MSTP curriculum begins each year with a two-day retreat scheduled during the week that new students arrive on campus. The retreat provides an opportunity for interactions among MSTP students and faculty with a focus on cutting-edge science. Presentations are made by all students in the graduate phase of training.

Seminar Series. The MSTP Seminar Series is a student-driven, interdisciplinary seminar course in a journal club format designed to: (i) foster development of critical thinking skills by appraisal of contemporary scientific literature, (ii) enhance scientific creativity through discussion of experimental approaches and techniques, and (iii) develop oral presentation skills. The Seminar Series incorporates topics drawn from all areas of biomedicine and clinical, case-based components.

MSTP students choose the manuscripts to be presented with the advice and consent of their student and faculty advisors. Junior (M1) medical students usually present in small group sessions, while junior graduate students present in the large group setting. Senior graduate-phase students present their thesis projects in small groups and are assigned mentoring responsibilities to assist the junior students with presentations.

Clinical Preceptorship Program (CPP). The MSTP CPP objectives are to: (1) maintain and enhance their competency in clinical skills developed during the FCC year; (2) provide opportunity for students to explore subspecialties of interest; and (3) help students identify potential clinical mentorship in the area of their future clinical training. Participation in CPP eases their transition back to the final clinical year. By providing longitudinal interactions with subspecialty faculty, CPP also facilitates clinical mentorship and prepares our trainees for a successful residency match.

Data Club. The MSTP Data Club provides a forum for students to discuss current research. All are invited to attend the weekly summer meetings, but the Data Club is particularly designed for graduate-phase MSTP students.

Leadership Workshops. The MSTP Leadership Workshops provide formal training in leadership. The main objectives are to offer students an opportunity to assess their individual leadership styles, discuss cases in research and clinical leadership, and receive didactic instruction in core leadership competencies. The workshops are held biennially.

Career Development Workshop. The MSTP Career Development Biennial Workshop provides formal exposure to the variety of career paths chosen by physician scientists. Panel discussions focus on career options for physician scientists, the transition to independence, and work-family balance.

Physician Scientist Speaker Series. The Physician Scientist Speaker Series offers an opportunity for students to interact with renowned physician scientists who serve as excellent resources and role models. Speakers are invited by the students each semester to present a research seminar to the Vanderbilt community and give an after-dinner talk to the MSTP class.

Community Outreach. MSTP students direct the annual “Mini-MSTP” for local public school students to promote interest in developing physician scientist careers. Participants are exposed to clinical and research challenges that duplicate real-life events in the hospital and the laboratory. Mini-MSTP events include a visit to the Center for Experiential Learning and Assessment for an encounter with simulation technology, laboratory experiments, and interaction with MSTP students.

Advising Colleges. The Vanderbilt MSTP is organized into four advising colleges that serve as the primary advising mechanism for students in the program. Each advising college is led by three faculty members and includes student members from each phase of the MSTP. Physician-Scientist Training Program (PSTP) trainees serve as Associate College Advisors to contribute to the career development of MSTP students.

Student Advisory Committee (SAC). The MSTP SAC is a student-led committee which provides a forum to express programmatic ideas, challenges, or opportunities for improvement. SAC advises the MSTP Leadership Team about all aspects of program administration and curriculum.

Instruction in Preparation of Grant Applications. The MSTP Grant Preparation Workshop provides valuable training in grantsmanship including: (1) instruction on how a study section operates; (2) an MSTP student panel of current fellowship awardees; and (3) a Mock Study Section, developed in 2017 by a committee of MSTP student leaders.

Attendance Policy for Doctor of Medicine

Requirements for all Doctor of Medicine Students

Student Absence Request forms are available online at medschool.vanderbilt.edu/student-affairs/students. Required information includes the date, time, and reason for the absence request. The signatures of (1) the block/clinic/course director and (2) the associate dean for medical student affairs (ADMSA) or the assistant dean for medical student assessment (ADA) are required.

Important Considerations:

- Students should not make travel arrangements prior to receiving notification of the outcome of their request.
- Approval will not be granted just because travel arrangements have been made.
- Unapproved or denied absences will not be allowed.
- Students will be held responsible for didactic material they miss during approved absences. Make-up work for other activities may be required by course faculty/directors.
- A student cannot miss more than two days, and cannot miss required sessions (see "Required Sessions" below) on a month-long rotation. A student may petition to be permitted more than two days in a given rotation. If granted, the student must submit an absence form describing full extent of absence and must arrange to make up the additional time.
Examples of situations in which make-up work will not be allowed, and the student’s grade will be affected include:
- Absences for which no request was made
- Absences for which a request was made and denied.

PHASE-SPECIFIC REQUIREMENTS

Foundations of Medical Knowledge and Foundations of Clinical Care Phases

Students will be apprised of the attendance policies for a course on the first day that the class meets. Standards will be provided in writing and in most classes will be reviewed verbally by course directors. It is the student’s responsibility to understand which sessions are mandatory, the definitions of excused absences and personal days, and the consequences for unexcused absences.

It is expected that students will arrive on time for courses and other school-related obligations and demonstrate respect for teachers, fellow students, and others while participating.

1. Unless stated otherwise, students are not required to attend general lectures in FMK courses. However, because many topics are covered only in lectures and many exam questions are derived directly from this material, attendance in lectures is strongly encouraged.

2. During the clerkships, students are excused from clinical duties so that they may attend clerkship didactic sessions. Students are strongly encouraged to attend unless there is an urgent clinical situation or one that will enrich their education.

3. Student attendance for assigned clinical duty is mandatory. Similarly, student attendance at all classroom sessions that include patients (actual or simulated) is mandatory. These sessions are not recorded due to concerns regarding patient privacy.

4. Student attendance at all small group sessions is mandatory. Small groups may include discussion or presentation sessions, team-based or case-based learning sessions, laboratory sessions, etc., as defined for individual courses.

5. Student attendance at all examinations is mandatory. If, due to extenuating circumstances, a student cannot be present for an examination, the student must notify the course administration, the assistant dean for medical student assessment (ADA), and the associate dean for medical student affairs (ADMSA) immediately. The student will work with course leadership/administration to make arrangements to satisfy the examination requirement. Regarding NBME shelf clerkship examinations, in special circumstances, students may be granted permission to take a missed shelf exam on the standard makeup date (8:00 a.m. on the second Tuesday after scheduled shelf).

6. Attendance is mandatory for all sessions of the longitudinal days during the FCC phase, including all large group and small group sessions.

7. Student attendance may be required at other sessions, as indicated by the course administration.

8. Excused Absences from Mandatory Sessions. Students may be excused from mandatory sessions on the basis of serious health issues, family emergencies, religious holy days, or presentation of their work at meetings (other similar circumstances to be handled on a case-by-case basis). In these circumstances, students must notify the course administration at least 4 weeks in advance (or as soon as possible for an emergency) for each active course or clerkship in which sessions would be missed if they are requesting an absence. If the mandatory session is a small group, students also should notify their group facilitator and group mates. If the student will miss clinical duties, he/she must also alert the supervising resident. It is recognized that in some situations students will not be able to provide advance notice. In these circumstances, students should contact the course administration as soon as possible to explain why they were unable to attend.


It is recognized that life events that are neither serious health issues nor family emergencies may affect a student’s schedule. In these cases, students may request one or more personal days in order to miss a mandatory session. Permission for absence may be granted at the discretion of the individual course directors. The rules that govern the use of personal days are:
- Students must request permission from the course administration for each active course in which sessions would be missed in writing and in advance using the appropriate Student Absence Request form.
- If granted an absence, students who anticipate missing a mandatory small group session due to taking a personal day must notify their group facilitator/clinical team/classmates at least 4 weeks in advance that they will not be attending.
- Students will be held responsible for material they miss when taking personal days. At the discretion of the course administration, students may have to complete a make-up assignment on material they missed.
- During the FMK phase, students will be allowed to take up to a total of three (3) personal days (not more than one day per course).
- Personal Day Blackout Periods. Students may not use a personal day to extend a school holiday (not including normal weekend breaks). Also, students may not use personal days to miss mandatory sessions, including:
  - Examinations
  - First day of any class
  - Orientation
  - Last day of class before an assessment in a block
  - Other mandatory sessions as determined by course leadership/administration

10. At the discretion of the senior resident and the attending physician on the ward team, students may occasionally be given time off from clinical duties when working conditions permit. In the event such time off is expected to last longer than 24 hours, a signed Student Absence Request form must be submitted per the instructions above.

11. Unexcused Absences from Mandatory Sessions. All absences from mandatory sessions that are not defined above as excused or personal days are considered unexcused absences. Unexcused absences are unacceptable and will have a negative effect on the student’s competency domain evaluation and/or overall grade in the class.
Immersion Phase

Introduction

This policy pertains to all mandatory learning experiences (didactic, small-group, clinical, etc.) that take place during the Immersion phase of the VUSM M.D. degree program. Students are expected to attend all required sessions as described in the course syllabus. However, because specific situations may arise where a student may need to miss a required session, the following policy applies.

Planned absence (pre-approval required):
- Interviews
- Religious holy days
- Presentations of work at an advertised external scholarly meeting

Emergency absence (approval required post facto if necessary):
- Serious medical issues
- Family emergencies

Students may submit requests to be absent for other life events, however these absences are highly discouraged and are likely not to be approved, given their impact on both the student learning experience and the clinical learning environment. Students are encouraged to plan their flex months to accommodate these events.

- Weddings
- Family events (non-emergency)
- Any other activities falling on required sessions

Request Process

Students may request advanced permission to miss required educational activities due to circumstances outlined above. To make such a request, a student must:

1. Request permission from the course director using the VUSM Immersion Phase Absence Request Form at least four weeks in advance of the start of the course. Immersion leave request form is available at [medschool.vanderbilt.edu/student-affairs/students](medschool.vanderbilt.edu/student-affairs/students).

2. Email the signed VUSM Immersion Phase Absence Request Form to the associate dean for medical student affairs (ADMSA) or assistant dean for medical student assessment (ADA) for approval.

3. Contact appropriate parties regarding the absence (i.e., course director, small group facilitator, peers, longitudinal course directors, research area heads, and/or supervising clinician, as appropriate).

4. Student will be notified by course leadership regarding required make-up work.

5. Student will be notified by email regarding whether the request is approved or denied. If the absence is due to a health or family emergency (i.e., less than four weeks in advance), a student must:

   1. Contact the course leadership (i.e., course director, small group facilitator, longitudinal course directors, research area heads, and/or supervising clinician, as appropriate) as soon as possible about the situation.
   2. Submit the VUSM Immersion Phase Absence Request Form to the course director.
   3. Submit the signed VUSM Immersion Phase Absence Request Form to the ADMSA or ADA for approval.

4. Student will be notified by course leadership regarding required make-up work.

5. Student will be notified by email regarding whether the request is approved or denied.

Required Sessions

Absences during/on the following required sessions/days are likely not to be approved, given their impact on both the student learning experience and the clinical learning environment. Students who miss mandatory educational activities without approval in an Immersion phase course on/during a required session may fail the course. Required sessions include the following, unless indicated by course director:

- First day of any class
- Orientation
- Examinations
- Any day that extends a school holiday (except normal weekend breaks)
- Learning Communities face-to-face College sessions
- FHD face-to-face sessions
- Research mandatory sessions
- Week-long courses—all sessions
- Other sessions as determined by course leadership/administration as described in the course syllabus

Transportation

During their medical school careers, students may be placed for educational experiences in clinical sites located away from the Vanderbilt University campus. Students should be prepared to drive up to 35 miles from the Vanderbilt University campus to reach off-site placements. Students are responsible for their own transportation to and from all clinical sites for educational experiences, including all costs associated with that travel.

Medical Student Duty Hours

In order to encourage a well-rounded, balanced journey through the clinical years of medical school, it is the policy of Vanderbilt University School of Medicine that duty hours of medical students should reflect the general guidelines set forth for residents by the ACGME. We expect that:

1. Total required educational and clinical activities should not exceed eighty hours per week.

2. Clerkship and Immersion phase students should take one day off in seven; this is typically a weekend day.

3. Whenever possible, we suggest that when students take in-house call, they should be allowed to leave at noon of the following day, but should be expected to return for required didactic components of the clerkships or Immersion courses.

   It is also expected that supervising house staff and attending physicians will be sensitive to student fatigue and total number of hours spent on clinical and educational activities.

Extracurricular Work or Activities

The School of Medicine does not regulate the outside work or activities of its M.D. program students, although it does take the firm position of discouraging outside work. No outside commitments may be assumed by medical students that may compromise their responsibilities at the medical school. If the outside obligation creates a conflict of interest, a student may be required to discontinue it.
LEAVES OF ABSENCE

A student may request a leave of absence from school for any reason (personal, medical, research, dual degree, etc.), subject to the approval of the associate dean for medical student affairs (ADMSA). The student must submit a written request to the ADMSA, outlining the nature of the requested leave and providing the starting and ending dates. The ADMSA may grant the student a leave of absence for up to one year as long as the student is in good academic standing. Prior to leave, a plan for re-entry into the curriculum and meeting requirements for graduation should be outlined with the ADMSA, with the assistance of the associate dean for undergraduate medical education (ADUME) as indicated.

A student on leave of absence may request an extension of the leave beyond one year, subject to the approval of the ADMSA. The student must submit a written request outlining the nature of the requested extension and providing a new ending date. A request for extension of a leave of absence must be submitted to the ADMSA at least three months before the ending date of the approved leave. Requests may be made for additional extensions using the process outlined above.

Students who are not in good academic standing may request a leave of absence using the request procedure described above, but approval of the leave may be granted only by the student’s Promotion Committee (the request will be presented to the Promotion Committee by the ADMSA).

Students pursuing the Ph.D. as part of the Medical Scientist Training Program are not required to request a leave of absence when entering the Ph.D. phase of the program.

Leave of absence form is available at medschool.vanderbilt.edu/student-affairs/students.

Expectations for Conduct Regarding Examinations and Work Submitted for Academic Credit

Faculty and Students’ Responsibilities

1. In order to create and maintain an academic environment that promotes the highest professional standards, it is important to be transparent in the expectations of all students regarding conduct in examination settings and regarding all work submitted for academic credit. As stated in the Vanderbilt School of Medicine Honor Code, “By demanding great responsibility, the Honor System fosters an environment of freedom and trust that benefits the entire Medical School.” It is the responsibility of the faculty and staff to help protect the trusting environment created when the students agree to and sign the Honor Code pledge.

2. In order to facilitate transparency of expectations, students will be apprised of appropriate conduct for a given course on the first day of class or during the first week that a course meets. Standards of behavior for each course will be published in the course syllabus, and course directors will explain the pertinent points (especially in regards to examinations) verbally as well.

3. Appropriate attribution is expected for all work submitted for credit and in all entries to the electronic health record. Students must use proper citation practices and are expected to be aware of appropriate mechanisms to avoid plagiarism. Faculty will clarify if an assignment may be collaborative.

4. It is the student’s responsibility to be aware of and to adhere to the published guidelines for each course.

5. Incidents going before the Honor Council may be separately incorporated into the competency domain assessment and promotion committee review process as appropriate.

Expectations for Conduct in NBME Examinations

- “Suspicious behavior” during an exam may be construed as a violation of the Honor Code. Examples include looking at the work of other students and excessive talking or other disruptions.
- The use of cell phones is prohibited during the examination period, and phones should be stowed outside of the classroom until the examination is completed. Any cell phone brought into the exam room will be collected by the proctor until after the exam. If a student has a legitimate need to be available to urgent outside communications during the assessment period, the student must make the appropriate arrangements with the Office of Undergraduate Medical Education (OUME) prior to the assessment period. An OUME staff member will be designated to receive any urgent communications and will notify the student of outside communications if the need arises.
- Personal belongings may not be brought in the seating area of the testing room. All materials, except computers for online examinations, must be left outside the room or deposited in the area designated for personal belongings. Items listed below are not permitted in the seating area of the testing room:
  a. Personal digital devices, calculators, or cellular telephones
  b. Recording/filming devices
  c. Watches with alarms, computer, or memory capability
  d. Radios or paging devices
  e. Reference materials (books, notes, or papers)
  f. Backpacks, briefcases, luggage, coats, or brimmed hats
  g. Beverages or food of any type
  h. Eyeglasses are permitted, but may be subject to inspection by proctors
- For online examinations, students are responsible for confirming device eligibility, working with the educational technology team as needed.
- Students may leave the room only for restroom breaks during the examination. Leaving the room can be disruptive to other students, so it is preferred that students not leave the room unless it is unavoidable. Students will be escorted by a proctor to the restroom, and additional testing time will not be given.
- It is unacceptable behavior to discuss the exam or course materials with others during the exam.
- If a student finishes the exam before time is called, the student should leave quietly and not return to the classroom or immediate outside area until the examination period is over.
- Because students take exams at different times, material covered on exams SHOULD NOT be discussed inside or outside of the examination room during the designated exam period.
Assessment System for M.D. Program

Assessment Philosophy

The underlying philosophy of the assessment system at Vanderbilt University School of Medicine (VUSM) is that attainment of the knowledge, skills, and attitudes competencies needed for safe, effective, patient-centered care is a developmental process that occurs over many years of education, training, and practice. It is also based on a philosophy of continuous improvement. Therefore, the system is designed to:

- Guide learning with measures that benchmark performance against explicit expectations;
- Promote the skills needed for accurate and reflective self-assessment;
- Direct students to next learning steps and associated learning resources;
- Provide evidence for high-stakes decisions;
- Provide evidence of program effectiveness.

Since the abilities to accurately self-assess and subsequently create appropriate learning goals are also developmental processes, the system provides students with faculty coaches who assist them as they practice these skills. Importantly, the system encourages students to assume increasing levels of responsibility for their own learning.

Elements of the Student Progress and Promotion Process

- VUSM Core Competency Domains: Medical Knowledge; Patient Care; Interpersonal and Communication Skills; Professionalism; Practice-based Learning and Improvement; Systems-based Practice; Leadership; and Scholarship.
- Competencies that describe the specific knowledge, skills, and attitudes within each core competency domain and the synthetic application of those competencies to perform “entrustable professional activities.”
- Milestones for focus competencies within each domain that describe explicit and measurable behaviors that learners demonstrate as they progress from novice to expert.
- Course and clerkship grades
- Centralized assessment events
- Full participation in the portfolio review process, as described below. All formative and summative assessments are gathered in an interactive, electronic learning portfolio and can be sorted by course or by competency domain to facilitate portfolio reviews.

Grading Policy

The Vanderbilt University School of Medicine has established a series of learning objectives for its medical educational program that are aligned with the competency domains described by the Accrediting Council for Graduate Medical Education (residency requirements): (1) medical knowledge, (2) patient care, (3) interpersonal and communication skills, (4) professionalism, (5) practice-based learning and improvement, and (6) systems-based practice. The ongoing growth of competency in these domains defines the successful development of the physician and occurs during medical school and throughout one’s career.

Performance across these domains is assessed in every course and program. In addition to meeting course requirements, satisfactory performance must be maintained in each domain. Efforts are made by program faculty to bring any significant performance concern during a required course or clerkship to the attention of the student early enough to allow sufficient time to develop a remediation plan. A student for whom major concern persists despite coaching may be given a failing grade (F) for the course and/or may not be promoted despite satisfactory performance in other categories.

Grading Scales

Pass/Fail. Final grades of Pass (P) or Fail (F) will be applied in the following courses:
- FMK: All courses
- FCC: All courses
- Immersion: Electives; Learning Communities; PLAN (Inquiry Program); Foundations of Healthcare Delivery (with the exception of QI courses listed below)

Honors/High Pass/Pass/Fail. Final grades of Honors (H), High Pass (HP), Pass (P), Fail (F) will be applied in the following courses:
- Immersion: All ACEs, ISCs, AIs, Foundations of Healthcare Delivery Quality Improvement (QI) and Patient Safety (Sections 1-3 or Advanced Track), and the Research Immersion project
- An H grade will be given to students for superior or outstanding achievement in all aspects of course work and multiple competency domains.
- An HP grade will be given to students with superior achievement in several, but not all, aspects/domains.
- A P grade will be given to students who demonstrate satisfactory achievement in all aspects/domains. If any aspect of performance is marginal, this will be indicated by a designation of “threshold” in the domains(s) of concern.
- An F grade is given for unsatisfactory work resulting in failure. A student receiving a “below threshold” in any competency domain, or “threshold” in multiple domains, may receive an F for the course or clerkship.
- The grade of W is entered onto the transcript when a student withdraws from a course (or from the degree program) after the close of the change period but before the end of the term.

Temporary Grades

P-star. A temporary grade of P* will be given to students whose performance is marginal because of important deficiencies in some aspects of course work which preclude awarding academic credit for completion of that course. The P* grade should only be applied if a plan for remediation, such as repeating an exam, has been put in place. The P* grade may be applicable for academic credit only after that remediation has been completed to the satisfaction of the course director, in which case the P* will be converted on the official transcript to a P. No grade higher than a P can be assigned after such remediation, and the domain(s) of concern will be marked as threshold in the final grade. In the absence of satisfactory remediation, the P* grade will be converted on the official transcript to an F. If a transcript is requested before final resolution, the P* will be present to indicate the course work has not yet been completed at a satisfactory level.

It is at the discretion of each course director whether such remediation options will be available for each course; this will be published in the syllabus. Any remediation plan must be completed in a timely manner: for courses in the Immersion phase, within six weeks of receiving the P* grade; in FCC, within six weeks of completion of the student’s final clerkship block; in FMK, prior to entry into the FCC phase. P* should not be
used to indicate performance that is marginal but does not require course-specific remediation. Such a concern should be indicated as a threshold performance in the relevant competency domain(s). This will then be tracked across courses in the portfolio system. *P* should not be used to indicate incomplete work.

**Incomplete.** A grade of Incomplete is to be used only to reflect that mandatory course work has not been completed (for example, if the student was ill and did not attempt the final exam). Incomplete should not be used when work has been completed but at an unsatisfactory level (i.e., work that requires remediation). Any incomplete course work must be completed in a timely manner: For courses in the Immersion phase, within six weeks of receiving the I grade; in FCC, within six weeks of completion of the student's final clerkship block; in FMK, prior to entry into the FCC phase. There is no ceiling on the final grading or competency ratings for a student who previously received an Incomplete.

**Clinic Assessments of Student Performance**

Faculty and house staff providing primary evaluations of student performance may be asked to report (1) behaviors consistently displayed by the student in the various competencies subject to evaluation, (2) judgment of the level of supervision the student requires to complete core tasks, (3) an overall assessment of the student's performance on service, and (4) an evaluation of suitability for appointment to residency on the service. In addition to scaled ratings of student performance, faculty are encouraged to provide meaningful narrative comments.

**Faculty Advisers' Roles and Responsibilities for Grading**

The School of Medicine supports an active advising program to inform the associate dean for undergraduate education. Faculty members who serve as advisers to individual students are selected and trained to counsel students regarding academic progress, career direction, and personal well-being. In order to preserve the integrity of the assessment system and protect students from either real or perceived bias, faculty members who serve in formal advisory roles will not assign summative course or clerkship grades without the assistance of a faculty grading committee.

Faculty members who serve as advisers to individual students may provide formative feedback to students as part of other teaching responsibilities. If this feedback is submitted to a course director or grading committee as part of a summative assessment process, the advising relationship will be disclosed.

**Student Grievance Concerning Grades**

Students should seek redress of a problem with a grade as soon as possible after receiving the grade and in no case later than four weeks after the grade is released. Students with a problem should confer directly with the course director. Every effort should be made to resolve the problem fairly and promptly at this level. If the student cannot resolve the problem through discussion with the course director, the student should formally request an appeal, within two weeks of talking with the course director, from the student affairs (ADUMA). The ADUMA will inform the associate dean for undergraduate education (ADUME), which will prompt a review of the course’s assessment practices by the Standing Assessment Committee, as well as review of the individual student’s situation by the ADUMA, the ADUME, and a neutral faculty reviewer as indicated. If resolution is still not achieved, the associate dean for medical student affairs will refer the case to the senior associate dean for health sciences education, who will make the final decision.

**Medical Student Progress and Promotion**

Promotion committees of the faculty, in consultation with representatives of the faculty responsible for instruction, are charged with making recommendations to the dean and the executive faculty regarding progress and promotion of students. The executive faculty of the School of Medicine has final responsibility for the determination of medical student progress in the school.

Students who entered the curriculum in or before 2012, exited the traditional pathway and then return, will follow the promotion procedures applicable to the class with which they are scheduled to graduate; however, as much as feasible, their academic requirements will be aligned with expectations at the time of their entry to school. Such students are expected to confer with the ADUME and the ADMSA to clarify expectations prior to registering for their final year.

**Portfolio Reviews**

The portfolio review process serves to summarize evidence regarding student performance to direct future learning and to guide decisions of the promotion committees (see below). At times designated on the academic calendar for each phase, students will prepare either formative self-assessments (FSAs) or summative self-assessments (SSAs) that reflect on the current cycle. These self-assessments use a VUSM Core Competency format and are guided by templates in the portfolio.

Students begin their self-assessments by reviewing data accrued for each of the VUSM competencies in a core competency domain. This data will accrue from curricular assessments, and students may enter data that represents extra-curricular activities, such as volunteer work or organizational leadership. For each competency, students will designate a milestone level that describes their consistent level of achievement. Students will assign an overall progress level for each VUSM core competency domain:

For the FMK and FCC phases, these domain progress levels are:

- Below Threshold
- Threshold
- Target
- Reach

"Below Threshold" indicates failing performance. "Threshold" indicates a marginal performance that meets expectations in some areas but not all. "Target" indicates a performance that meets all expectations. "Reach" indicates a performance that exceeds expectations for students in that phase.

Because the attainment of competencies is a developmental process, the performance levels that define Threshold, Target, and Reach will progress with the phases of the curriculum.

After assigning a domain progress level for each core competency domain, students must compose the following:

- A brief justification for each level, citing specific assessment evidence. These justifications are guided by prompting questions and must be written for all core competency domains.
• A summary reflection indicating areas of strength, areas for improvement and areas of interest. This reflection will be guided by prompting questions.
• A personalized learning plan (PLP) based on the summary reflection. The PLP will consist of:
  o Learning goals
  o Activities that students will undertake to meet learning goals
  o Metrics that will indicate attainment of learning goals
  o A timeline for achievement

Students must specifically address any core competency domain with a progress level of Threshold or Below Threshold both in the summary reflection and in the PLP.

Students submit self-assessments and PLPs electronically and schedule meetings with the portfolio coaches during specific review periods. Coaches review student portfolios prior to the meetings, and independently designate progress levels for each core competency domain. At the time of the meetings, coaches and students review assessments, discuss and attempt to resolve any differences in progress level determinations, and review PLPs for appropriateness. Because this process integrates performance evidence across courses, it is possible that a student’s performance could be designated as “threshold” or “below threshold” in a competency domain despite passing grades in all courses. The original student self-assessment, the coach assessment, and the report of the joint assessment resulting from the student-coach meeting will be retained in the portfolio. If differences between student and coach interpretations of evidence were not resolved during the student-coach meeting, this will be indicated in the accompanying form.

Promotion Committees

The dean or the dean’s designee, (usually the senior associate dean for health sciences education [SADHSE]), will appoint a Promotion Committee to each of three phases of training (FMK, FCC, Immersion Phase). Promotion Committees will meet regularly to review progress of individual students and the aggregate progress of the cohort of students in its assigned phase.

Each committee will consist of at least seven faculty members who represent a variety of clinical and basic science departments, as well as the broad diversity of the VUSM community. Each member will serve a four-year term, with staggered terms.

The SADHSE will appoint a faculty chair for each committee, and the associate dean for undergraduate medical education (ADUME) oversees the promotion committee process. The chair of each committee may determine whether members must be physically present or may participate remotely for any given meeting. Every Promotion Committee member will be assigned a cohort of students to follow throughout the phase. Prior to each meeting, promotion committee members must review the portfolio and learning plan of each assigned student. Promotion Committee members will have complete access to the assessment evidence in the Learning Portfolios of all students assigned to them to assist in making these determinations.

Meetings will occur three times during the Foundations of Medical Knowledge (FMK) phase, twice in the Foundations of Clinical Care (FCC) phase, and three times in the Immersion phase. Additional meetings may be called by the ADUME if performance concerns arise regarding any individual student or as needed at the discretion of the ADUME.

Students to be discussed during committee meetings include:

• any student on probation;
• any student with a failing or marginal course grade;
• any student with a domain progress level of Threshold or Below Threshold;
• any case of unresolved differences between student self-assessment and the coach assessment;
• any student seeking special privileges that require committee permissions; and
• other students as deemed necessary by faculty or administration.

If a committee member cannot attend a meeting in person or remotely, another member of the Promotion Committee will be designated as a substitute. The committee member initially assigned to the student will share with the alternate member any information that he/she may have assembled in preparation for the meeting. Discussion will include input from the student’s portfolio coach, course directors, and other members of the committee.

The associate dean for medical student affairs (ADMSA), the ADUME, the assistant dean for medical student assessment (ADA), and the senior associate dean for diversity in medical education, will be non-voting ex officio members of each committee. In addition, course directors for their respective phases will attend Promotion Committee meetings to provide information about the class as a whole, and to answer questions that committee members may pose regarding individual students. Portfolio Coaches will also attend committee meetings during which any of their assigned students are scheduled for presentation. A quorum of the Promotion Committee shall consist of at least five of the voting members of a committee; however, any proposed dismissal requires the participation of all voting members, unless an exception is granted by the SADHSE.

Each promotion committee is charged with making decisions or recommendations as follows:

Satisfactory Progress

Formative reviews will assess whether students are making satisfactory progress towards attaining the achievement levels required for promotion to the next phase, or towards graduation, based on review of the assessment data compiled in each student’s portfolio. The Promotion Committees will make a final determination regarding the correct domain progress levels based on the evidence in the portfolio as well as evidence presented during the committee meeting. Any students on probation will be closely re-evaluated during these meetings.

1. Satisfactory Progress: Generally for students with progress levels for all domains at Target or Reach and passing grades in all courses
2. Satisfactory Progress with Concern: Generally for students with 1-2 domains at Threshold (regardless of course grades) and/or P* course grade
3. Unsatisfactory Progress: Generally, for students with >2 domains at Threshold, persistent Threshold performance in any single domain over time, or any domain Below Threshold (regardless of course grades), and/or a failing course grade**. Ordinarily these students will be placed on academic probation. (See section on Probation below)

**Any performance deficiency that is serious enough to result in course failure must be attributed to one or more specific competency domains by the course director, which will automatically result in a Below Threshold level in that domain for that portfolio review cycle.
Students with designation of “Satisfactory Progress with Concern” or “Unsatisfactory Progress” will receive a Letter of Concern from the Promotion Committee that outlines areas of concern and expectations for improvement. Letters of Concern are not reported externally and are intended to assist students in avoiding adverse actions (see below). The PLPs for these students must explicitly address concerns and be approved by the Promotion Committee; the progress of such students will be reviewed at the next committee meeting. The Promotion Committee may require additional meetings between the coach and such students during the period between PC meetings. Students who fail a required block, course, or clerkship must repeat that element, or must have an alternate remediation plan that is approved by the course director. The remediation plan must be articulated in the PLP. In addition, failing Step 1 or Step 2 Clinical Knowledge of the USMLE automatically results in a Below Threshold score in Medical Knowledge and must be addressed in the PLP; failing Step 2 Clinical Skills automatically results in a Below Threshold score in Patient Care and must be addressed in the PLP.

Promotion

Decisions regarding promotion will be made at the end of the FMK phase and the end of the FCC phase. In view of the integrated and individualized nature of the Immersion phase, meetings during this phase will focus on the academic progress of the individual students, granting eligibility for the national residency matching process (NRMP), and certifying eligibility for graduation.

Promotion Committees will determine whether students are ready for promotion based on successful completion of all phase requirements, as evidenced by passing grades in all required courses, and satisfactory progress in each VUSM Core Competency Domain. The Promotion Committee’s determination of satisfactory progress in competency domains will be based on review of the assessment documentation compiled in each student’s learning portfolio. Students must fully participate in the self-assessment and personalized learning plan (PLP) process in order to be promoted to the next phase.

The FMK and FCC Phase Promotion Committees will make one of the following recommendations for each student (see initial section under Promotion Committees, above, for frequency of Promotion Committee meetings):

1. Promotion to next phase
2. Promotion contingent upon authorized delayed completion of specified requirement(s). To support the individualized nature of our curriculum, situations may arise in which it is appropriate to permit special scheduling of educational opportunities. Students in good standing may request such scheduling flexibility through the ADUME. Some students in compliance with approved targeted remediation plans also may be eligible for this action.
3. Promotion on probation which will include a plan for targeted remediation
4. No promotion
   a. Targeted remediation, with later re-evaluation for promotion
   b. Repeat the phase on probation
   c. Dismissal

Targeted remediation may include repeating a failed exam, retaking a failed course, and/or specialized coaching for deficits in specific domains.

The Immersion Promotion Committee will make one of the following decisions or recommendations for each student in the fall of the anticipated final academic year of training (see initial section under Promotion Committees, above, for frequency of Promotion Committee meetings):

1. Promotion to senior status (eligible for match process)
2. Promotion on probation (eligible for match process) which will include a targeted remediation plan
3. No promotion
   a. Targeted remediation
   b. Dismissal

Because the portfolio review includes assessment of competencies across courses, it is possible for a student to pass all courses and still have concerns within competency domains that warrant probation or dismissal.

Decisions on all actions other than dismissal (promotion, promotion on probation, no promotion with targeted remediation, or no promotion with repeat the phase on probation) are made by the Promotion Committee. The SADHSE will review those decisions upon the written request of the student as set out in the section on probation below.

Students will be notified by the committee chair and the ADUME of all Promotion Committee decisions. For the action of promotion, this shall generally be done in writing. For other actions of the Promotion Committee, in addition to written notification, the student will be informed in person (if possible) by the ADUME or the ADMSA in order to facilitate appropriate advising.

Eligibility for Special Experiences

All committees may serve a role in recommending students for special opportunities, such as dual degrees or leaves of absence.

Certification for Participation in Residency Match Process

Students apply to residency programs during the fall semester of the intended academic year of graduation. In the spring semester, the School of Medicine must officially certify that students participating in the match process are eligible for graduation. The Promotion Committee for the Immersion Phase will review student progress to make this determination in February. Any student with insufficient completion of requirements for graduation (accounting for planned course work in February, March, and April) could be withheld from the match process.

Medical Student Performance Evaluation

The Medical Student Performance Evaluation (MSPE) is created as a part of a student’s permanent record and is submitted through the Electronic Residency Application Service (ERAS) system by October 1 for fourth-year medical students. Included in the MSPE are summative comments from performance evaluations throughout medical training.

Generally, the associate dean for medical student affairs works with students on the creation of the MSPE. However,
students may instead choose to work with the senior associate dean for health sciences education, the associate dean for undergraduate medical education, or the senior associate dean for diversity to create the MSPE. Students are neither asked nor expected to provide any reason or justification for their choice of MSPE writer.

Commencement

The university holds its annual Commencement ceremony following the spring semester. Degree candidates must have completed successfully all curriculum requirements and have passed all prescribed examinations by the published deadlines to be allowed to participate in the ceremony. A student completing degree requirements in a summer or fall semester may participate in Commencement the following May, and ordinarily the degree will be conferred at the end of the term in which requirements are completed. Any student unable to participate in a Commencement ceremony will receive his or her diploma by mail.

Adverse Actions

Probation

Promotion Committees will ordinarily recommend that a student be placed on academic probation if course grades include any failures, or if competency progress levels are at Threshold for two or more domains, persistently at Threshold in a single domain despite coaching or remediation, or at Below Threshold in any single domain.

Academic probation generally monitors performance in active course work for a period of time as specified by the Promotion Committee. Probation serves three functions:

- It serves as official documentation that the student is deficient in areas related to academic performance and/or competency development.
- It provides a pathway that the student must follow in order to regain good standing. This may include remediation, maintaining appropriate performance standards, and/or adhering to professional expectations.
- It describes the consequences that will result if a student does not meet stated expectations during the period of probation.

Probation will be noted in the Medical Student Performance Evaluation and may be reported in graduation verifications (e.g., for medical licensure).

The personalized learning plans (PLPs) for students who are placed on probation must include a remediation plan that explicitly addresses the domains of concern and is approved by the Promotion Committee. The committee may add requirements to the PLP, such as regular meetings with the ADMSA or other advisers, and/or recommendations such as elimination of extra-curricular activities that may be interfering with satisfactory academic progress. All students who are placed on probation will receive a letter from the ADUME and the chair of the Promotion Committee that outlines reasons for the probation, requirements and recommendations for addressing deficiencies, conditions for removal of probation, including an expected time frame, and actions that may be taken if conditions are not met.

Any student on probation will be presented at the next Promotion Committee meeting to determine whether there has been satisfactory progress (see initial section under Promotion Committees, above, for frequency of Promotion Committee meetings). At that time, the committee may take the following actions:

1. Remove probation: Domains of concern now at Target. Probation can be removed at any PC regular meeting if students have satisfactorily addressed deficiencies, even if this is before the time frame originally designated by the PC.
2. Continue probation: Domain scores not yet at Target but progress is being made.
3. Recommend dismissal: If a student who is on probation receives a failing or P* grade in a course, or demonstrates persistent Threshold or Below Threshold performance in any competency domain, the Promotion Committee will consider dismissal.

Temporary Suspension

The School of Medicine reserves the right, through the SADHSE (or designee), to temporarily suspend a student for conduct disrupting or otherwise negatively impacting the learning environment, pending referral to the Promotion Committee or other appropriate process. The SADHSE will notify the student in writing of the conditions of the temporary suspension. If the student is reinstated, the student will work with the ADMSA to address any course work missed during the suspension.

Dismissal

Promotion Committees ordinarily will recommend dismissal only after a student has been given a reasonable probationary period to address deficiencies. Most often, this reasonable period consists of a full academic phase or academic year. Dismissal may also be recommended at any time for a student who demonstrates either a singular egregious behavior or is involved in one or more serious incidents inconsistent with the expectations for medical students at VUSM or in violation of university policy.

A decision to recommend dismissal requires participation of all promotion committee members, unless an exception is granted by the SADHSE. The committee will meet as soon as possible to consider the situation, including its severity, and render a recommendation. The ADMSA will meet with the student prior to the committee meeting to hear the student’s explanation, including any mitigating circumstances that could affect the committee’s recommendations. The ADMSA will present the student’s explanation, as well as any mitigating circumstances, to the Promotion Committee. Alternately, the student may elect to appear before the committee in person, submit an explanation in writing, or ask another faculty member to appear on his or her behalf.

Any recommendation for dismissal will be presented by the ADUME to the dean or the dean’s designee which is normally the SADHSE. The dean or designee may reverse the recommendation, in which case the dean or designee will respond in writing to the Promotion Committee. In this circumstance, the Promotion Committee will consider whether probation or other action is appropriate under the guidelines above. If the dean or designee accepts the recommendation of dismissal, the decision is described in a notice to the student written by the promotion committee chair and the ADUME. This communication is presented to the student in person (if possible) by the ADUME or the ADMSA.
Student Recourse Regarding Promotion Committee Actions

Probation/Non-promotion

Students may ask for reconsideration of any decision for probation or non-promotion. The request must be made in writing to the associate dean for medical student affairs (ADMSA) within seven (7) calendar days of delivery of the committee decision. Reviews are carried out by the senior associate dean for health sciences education (SADHSE). The student may meet with the SADHSE or present any additional information in writing. The SADHSE will review the information presented by the student, information from the associate dean for undergraduate medical education (ADUME), and input from the relevant promotion Committee (to include minutes, letters issued by the Committee, and direct input from the Committee Chair). The SADHSE will: (1) uphold the Promotion Committee decision, (2) request a meeting of the Promotion Committee for reconsideration of additional information, or (3) reverse the decision. The decision of the SADHSE will be provided in writing to the Promotion Committee. Even if the SADHSE reverses a decision of the committee, the SADHSE can require that the student follow any committee requirements and/or recommendations for addressing deficiencies.

Dismissal

Upon a decision of dismissal, a student will be notified in writing of that decision and of the following options:

1. Voluntary withdrawal from VUSM. The decision to withdraw must be presented in writing by the student to the ADMSA within seven (7) calendar days after the student is informed of the decision for dismissal.
2. Dismissal. If the student does not request to withdraw within the seven-day period, the dismissal will take effect on the eighth calendar day.
3. Appeal. The student must make a formal request for appeal in writing (which may include electronic mail) so that it is received by the ADMSA within seven (7) calendar days after the student is informed of the decision for dismissal. A student who requests an appeal forfeits the option to withdraw. The ADMSA will serve as the student’s information resource in the appeals process and will inform the ADUME and the SADHSE of the student’s request for appeal.

If a dismissal decision is appealed, the student will be placed on administrative leave and may not participate in patient care duties until the appeal is resolved. The dean or dean’s designee, usually the SADHSE, will assemble and convene a review panel consisting of at least five (5) members of the executive faculty for an appeal review meeting within 30 days. In this review, the role of the dean or dean’s designee is purely administrative, and he or she has no decision-making authority in this context. In preparation for the meeting, the ADUME will make available any relevant information/document to the panel, which will include all the assessment components of the student’s portfolio. The ADMSA will provide information to the student about the process. The student may choose to be present at the appeal review meeting and/or make a presentation in writing, which may contain documentation from other students, faculty members, and/or other sources. The student cannot have other representatives at this meeting. The chair of the Promotion Committee and the ADUME will attend this meeting to present the findings of the Promotion Committee. The ADMSA will also attend the meeting to answer questions from the review panel. The review meeting is conducted without the presence of attorneys for either party. However, either party may consult with its own counsel prior to the review meeting or during any breaks that might take place during the meeting. If the review panel upholds the decision, the student will be dismissed without the opportunity to withdraw. If the review panel reverses the decision, the review panel will provide the Promotion Committee with its written findings and will refer to the Promotion Committee for consideration of whether probation is appropriate and, if so, for determination of the requirements and conditions to accompany probation. The decision of the review panel will be final for the school.

Withdrawal from School

Students who wish to withdraw from the School of Medicine for any reason must do so in writing to the associate dean for medical student affairs. In some cases, the student may be able to receive a refund of tuition, but it is important that the student discuss this decision with VUSM Office of Enrollment Services staff before moving forward with the process. A student who has been dismissed from school, but decides to appeal the decision, is no longer able to choose to withdraw. If a student withdraws, reentry is possible only through the application process.

M.D. Student Support and Advising

Vanderbilt University School of Medicine (VUSM) provides comprehensive advising resources to promote student wellness and success in medical school. The advising program provides distinct resources to address the three domains of student life: academic, career, and personal. Students are introduced to the system of advising at orientation prior to entering their first year of medical school. Subsequent discussions of advising resources take place in a number of settings during the first semester of medical school. In addition to the formal advising system, a variety of other resources for student academic support exist, including phase/course/clerkship directors, course self-assessment modules, group study, and optional review sessions.

Students are strongly encouraged to seek assistance and support of various types as needed during training. The abilities to self-identify a need for assistance/support and to reach out to resources are important professional skills, and students are expected to develop these skills during their medical school careers.

School of Medicine Resources

VUSM Office for Medical Student Affairs. This office provides resources to support all students. The ADMSA is available for individual meetings and hosts weekly office hours.

VUSM Colleges. All entering students are placed in one of the four advisory Colleges upon matriculation—Batsch, Chapman, Gabbe, or Robinson. Each College is led by two faculty College mentors, with whom students meet regularly in groups and individually, as needed. At these meetings the College mentor and student discuss the student’s progress, wellness, and career exploration. In addition to group and individual meetings, the College mentors have weekly office hours, as well as study breaks for students. Students may connect with their College mentors at any time for guidance and support. Although College mentors
provide direct teaching in a variety of settings, they do not assign student grades, and College mentors do not make decisions regarding promotion of students from one year to the next. College mentors do not have access to the students’ academic records.

Learning Portfolio. Beginning with the entering class of 2013, each student is assigned to a Portfolio Coach and develops a learning portfolio. Students meet with their Portfolio Coaches individually at designated time points to critically review individual performance data and establish academic goals across all domains of competence. Additionally, each student should meet with his/her Portfolio Coach on an as-needed basis to review any specific academic concerns. Refer to the Medical Student Progress and Promotion section of this catalog for a detailed description of the learning portfolio system and portfolio coaches.

Student Assistance Program. This program provides students with guidance in study skills, test-taking strategies, and general advice for academic success. Students may directly contact the Student Assistance Program director regarding academic concerns.

VUSM-Funded Tutoring Services. Tutoring funded by the School of Medicine is available for students who are having serious difficulty academically or who are deemed by the block/course director or the Student Assistance Program Director to be at risk for marginal or failing performance (ordinarily ~75 percent or less).

Decisions about access to this program and about tutor assignments are made jointly by the block/course director(s) and the director of the Student Assistance Program. This allows the matching of individual student needs with individual tutor strengths and assures that tutoring resources are distributed appropriately. Generally, it is expected that students will have availed themselves of other forms of student academic support (e.g., course self-assessment modules, group study, review sessions, etc.) before entering formal tutoring.

If a student has failing or marginal performance in a block or course, and wishes to obtain a VUSM-funded tutor, he/she must follow these steps:

a. The student sets up a meeting to consult with the block/course director(s) and/or the Student Assistance Program director.

b. Once the student’s situation has been assessed by the block/course director(s) and the Student Assistance Program director, the appropriate level of tutoring support will be determined.

c. On assignment of a tutor, the student will contact the assigned tutor to set up tutoring appointments.

d. The student should also review performance challenges with his/her Portfolio Coach and include the area(s) of concern in his/her Personalized Learning Plan.

Because VUSM-funded tutoring services require no payment from students, those who receive tutoring are responsible for signing a tutoring sheet that confirms that he/she worked with the assigned tutor for the time indicated by the tutor. Tutoring sheets must be submitted by the tutor to the Office of Medical Student Affairs in a timely manner.

The duration of time during which VUSM-funded tutoring services are provided is determined by block/course directors and/or the Student Assistance Program Director. Eligibility for services is reassessed on an ongoing basis once tutoring begins. Individual tutor assignments may be changed or adjusted over time to meet the needs of the pool of students requiring aid.

Important note about VUSM-funded tutoring: In situations where VUSM-funded tutoring has been recommended, and the student decides not to avail him/herself of this service, he/she should be aware that this may be viewed negatively by the Promotion Committee in the context of ongoing academic difficulty.

Privately Paid Tutoring. Students who are performing adequately but wish to seek additional assistance through private tutoring (e.g., from upper classmen) are responsible for arranging for these services and for payment.

VUSM Office for Diversity Affairs (ODA). This office provides resources to support students on issues related to disability, ethnicity, gender, religion, and sexual orientation. The many programs in ODA serve individual students’ needs and educate the medical school community on diversity issues.

University Resources

The university provides a range of services to School of Medicine students, including access to medical care, psychological counseling, and disability accommodation. The university also provides resources to protect all students from discrimination, harassment, and retaliation. Information on these and other university services may be found in the Life at Vanderbilt chapter of this catalog.

Faculty Support and Advising Roles

Many individuals provide advising and support to VUSM students. Each of the advising roles at Vanderbilt is defined in a manner that makes it distinct from, yet complimentary to, the other roles in the system. Each faculty member in an advising role undergoes development on the specific role as well as the overall advising system. The product of faculty development is an advisor who is able to perform his or her advising role responsibilities and is also able to refer students to resources as appropriate to individual student needs.

Managing Multiple Faculty Roles

Faculty members engaged in multiple educational roles can face competing demands, which may directly or indirectly affect (or have the appearance of affecting) an individual’s professional judgment in exercising any educator duties and responsibilities. Of particular concern to students is the intersection of roles involving advising students regarding personal or academic struggles with roles in assessment of student performance or assigning grades.

To identify and manage potential conflicts, the VUSM administration established a system that defines compatible and incompatible faculty roles within the educational enterprise. Authority over this system resides centrally, with the Office of the Senior Associate Dean For Health Sciences Education (SADHSE).

The Educator Role Matrix (vanderbi.lt/rolematrix) illustrates roles that have been identified as including some potential for conflict. The matrix places advising roles in one of two categories as they relate to assessment activity: (1) Managed conflict, and (2) Incompatible conflict. For manageable conflicts (yellow on matrix), the adviser must develop and submit for approval by the senior associate dean for health sciences education a plan of action that mitigates or eliminates the role conflict.

The Office for Medical Student Affairs maintains records of Role Conflict Management Plans (management plans are available to students upon request). When roles are determined to be incompatible (red on matrix), the faculty member must relinquish either the assessing or advising role. Before each new academic year the associate dean for medical student affairs (ADMSA) reviews all educators’ roles and existing conflict

University Resources

The university provides a range of services to School of Medicine students, including access to medical care, psychological counseling, and disability accommodation. The university also provides resources to protect all students from discrimination, harassment, and retaliation. Information on these and other university services may be found in the Life at Vanderbilt chapter of this catalog.

Faculty Support and Advising Roles

Many individuals provide advising and support to VUSM students. Each of the advising roles at Vanderbilt is defined in a manner that makes it distinct from, yet complimentary to, the other roles in the system. Each faculty member in an advising role undergoes development on the specific role as well as the overall advising system. The product of faculty development is an advisor who is able to perform his or her advising role responsibilities and is also able to refer students to resources as appropriate to individual student needs.

Managing Multiple Faculty Roles

Faculty members engaged in multiple educational roles can face competing demands, which may directly or indirectly affect (or have the appearance of affecting) an individual’s professional judgment in exercising any educator duties and responsibilities. Of particular concern to students is the intersection of roles involving advising students regarding personal or academic struggles with roles in assessment of student performance or assigning grades.

To identify and manage potential conflicts, the VUSM administration established a system that defines compatible and incompatible faculty roles within the educational enterprise. Authority over this system resides centrally, with the Office of the Senior Associate Dean For Health Sciences Education (SADHSE).

The Educator Role Matrix (vanderbi.lt/rolematrix) illustrates roles that have been identified as including some potential for conflict. The matrix places advising roles in one of two categories as they relate to assessment activity: (1) Managed conflict, and (2) Incompatible conflict. For manageable conflicts (yellow on matrix), the adviser must develop and submit for approval by the senior associate dean for health sciences education a plan of action that mitigates or eliminates the role conflict.

The Office for Medical Student Affairs maintains records of Role Conflict Management Plans (management plans are available to students upon request). When roles are determined to be incompatible (red on matrix), the faculty member must relinquish either the assessing or advising role. Before each new academic year the associate dean for medical student affairs (ADMSA) reviews all educators’ roles and existing conflict
management plans to ensure that they conform to the school’s standards. Any new conflict management plans required are completed prior to the commencement of the academic year.

Key Advisory Roles

Associate Dean for Medical Student Affairs (ADMSA): The ADMSA is a member of the VUSM administration. Her/his primary role is advising on academic, career, and personal concerns. The ADMSA has office hours and meets with students in all years of training. The ADMSA is the primary VUSM official designated to write each student’s Medical Student Performance Evaluation, but students may request that another school official complete the MSPE. The ADMSA also writes letters of recommendation for students applying for scholarships or various academic opportunities. The ADMSA oversees the Colleges program, the Student Wellness Program, and the Careers in Medicine program. The ADMSA has access to all academic records. The ADMSA may not occupy any of the advisory or assessment roles contained in the Educator Role Matrix.

Assistant Dean for Undergraduate Medical Education (ADUME): The ADUME is a member of the VUSM administration. Her/his primary role is in the medical school involves development and delivery of curriculum and assessment for the M.D. degree. The ADUME has office hours and can meet with students in any year of training to discuss academic and career concerns. The ADUME frequently meets with students who are navigating the curriculum to maximize various academic opportunities. The ADUME has access to all academic records and administers the Promotion Committee process. The ADUME may not occupy any of the advisory or assessment roles contained in the Educator Role Matrix.

Assistant Dean for Medical Student Assessment (ADAMS): The ADA is a member of the VUSM administration. Her/his primary role is advising on academic, career, and personal concerns. The ADA has office hours and meets with students in all years of training to discuss academic and career concerns. The ADA frequently meets with students who are navigating the curriculum to maximize various academic opportunities. The ADA may not occupy any of the advisory or assessment roles contained in the Educator Role Matrix.

Assistant Dean for Medical Student Assessment (ADAMS): The ADA is a member of the VUSM administration. Her/his primary role is advising on academic, career, and personal concerns. The ADA has office hours and meets with students in all years of training to discuss academic and career concerns. The ADA frequently meets with students who are navigating the curriculum to maximize various academic opportunities. The ADA may not occupy any of the advisory or assessment roles contained in the Educator Role Matrix.

Graduate Certificate Programs

The School of Medicine offers graduate certificate programs to its students who wish to gain focused expertise in a specific area. Each program has its own admission and completion requirements. Students must submit an “Intent to Enroll” form to document their intention to pursue a certificate, as well as other documentation as needed. Permission of the degree program director and the certificate program director are required to pursue a certificate.

Biomedical Ethics

This certificate is designed to enable students to graduate with a high level of competence in analyzing and resolving ethical issues that they will face in practice and equip them to provide leadership to their colleagues, to the profession, and to the public in biomedical ethics.

Curriculum. This certificate is offered to students in the School of Medicine. Its curriculum consists of three elements:

2. A tailored Research Immersion to focus on the student’s special research interests within ethics, including options such as selecting a topic within a clinical specialty (for example, pediatrics, internal medicine, surgery, or psychiatry). Projects may combine empirical and conceptual work with mentorship provided by designated mentors within the ethics, education, policy, and society area of the M.D. program Immersion Phase Inquiry Program. The graduate seminar described above is part of the M.D. Immersion Phase Inquiry Program.

3. An apprenticeship with the Clinical Ethics Consult Service, which is offered as an M.D. degree Immersion course. The Ethics Consult Service of the Center for Biomedical Ethics and Society provides formal consultation to VUMC hospitals and conducts a wide range of educational programs in ethics for faculty, staff, fellows, residents, students, and others.

The graduate seminar, the Immersion phase research project, and the Immersion phase consult apprenticeship may be taken separately, but completion of the Certificate in Biomedical Ethics requires successful completion of all three components. More information can be found at https://www.vumc.org/cbmes/certificate

Global Health

The certificate promotes training opportunities in global health. Students in any Vanderbilt graduate or professional degree program who fulfill all requirements are granted a Graduate Certificate in Global Health upon receipt of their degrees.

Certificate Requirements. (12 credit hours total)

1. Core Course (choose one—additional courses may be taken for elective credit.)
   - Foundations of Global Health
   - Fundamentals of Global Health
   - Essential Skills in Global Health

2. Elective Courses—at least 9 credit hours in additional global health course work
   - These courses may be a combination of VIGH global health courses or other approved courses that have relevance to global health, including a Global Health ISC (3 hours), AE (3 hours), or research immersion (6 hours).
   - Students may individually tailor and/or design electives in consultation with faculty mentors. Practicum, thesis, research immersion, and individual learning courses that have relevance to global health may be approved for certificate credit.
   - All courses for this certificate must be taken for graduate credit and involve global health content.

3. To initiate this certificate, submit the Graduate Certificate in Global Health “Intent to Enroll” form, found at https://is.gd/GCGH_intent_to_enroll. Note: Your academic adviser or program director will need to sign this form.

4. To complete and receive this certificate, submit the Graduate Certificate in Global Health certificate application, found at https://is.gd/GCGH_certificate_approval. This application should be submitted at least two months prior to graduation.

More information can be found at vumc.org/global-health/education-and-training/academic-programs/gh-certificate.

Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) Health

LGBTQ patients experience disparities in access to and quality of care, leading to preventable, adverse health outcomes including elevated risk for specific chronic diseases and increased rates of suicide and depression. The Certificate in LGBTQ Health is designed to teach students how to address these disparities, improve the health of LGBTQ patients, support education around LGBTQ health, and foster research on the optimal ways to care for LGBTQ patients and families. The Certificate in LGBTQ Health comprises three elements:

1. Research Immersion in LGBTQ Health. Students will select a research topic within the realm of LGBTQ health. This may include selecting a topic within a clinical specialty, for example, adolescent medicine, infectious disease, psychiatry, or surgery. Projects may combine empirical and conceptual work with mentorship provided by designated mentors.

2. LGBTQ Health in Inter-professional Practice or Sex, Sexuality, and Sexual Health Elective. Students choose from one of these two interdisciplinary courses focusing on sexual health in the general population and the specific health care needs of sexual and gender minorities. In addition to the basic sciences underlying the pathophysiology of health in these populations (e.g., HPV infection, HPA dysregulation with chronic stress), clinical specialties highlighted in the course include pediatrics and adolescent medicine, OB/GYN, psychiatry, and internal medicine with content threads from ethics, medico-legal health care, human development, and chronic care.

3. Capstone Project. Each student will complete a capstone project related to LGBTQ health. This may include development of patient education materials, providing a community or staff training, or implementation of a quality improvement project. The capstone is expected to enable students to demonstrate proficiency and acquired knowledge in the area of LGBTQ health.

Each element may be taken separately, but completion of the Certificate in LGBTQ Health requires successful completion of all three elements. More information can be found at vumc.org/lgbtq/graduate-certificate.

Neurodevelopmental Disabilities (NDD)

The Neurodevelopmental Disabilities (NDD) certificate program provides an opportunity for Vanderbilt medical students to receive substantial education and training in the field of neurodevelopmental disabilities. As participants in the Vanderbilt Consortium LEND* program (VCL), medical students will work with graduate students, residents, and fellows from up to fourteen other professions as they receive training to provide culturally sensitive, patient- and family-centered, interprofessional care to children and youth with special health care needs, including autism, intellectual disability, cerebral
palsy, learning disabilities, behavior problems, and genetic syndromes that are associated with NDD.

The program provides an intensive (more than 300 hours), two-semester interprofessional training experience which includes:

- Rigorous weekly core curriculum in NDD, a monthly leadership seminar series, and a Care Navigation Practicum in which trainees assist patients and families in care navigation while learning about socio-ecologic determinants of health and community-based services.
- Clinical experiences in various interprofessional hospital-based, community-based, and public health clinics.
- Interprofessional group projects.
- A broad list of activities from which the trainees can tailor their experiences based on their professional goals and aspirations.

At the completion of this experience, the students will have the requisite knowledge, skills, and attitudes to assume leadership roles in the field of NDD and to provide interprofessional, patient- and family-centered, community-coordinated, culturally competent, and empirically-based services to individuals with NDD and their families.

Participants receive tuition assistance in the amount of $7,500. Successful completion of the VCL program also meets the VUMC Foundations for Healthcare Delivery requirement for an interprofessional experience during the Immersion Phase and LC5–LC8 of the VUMC Learning Communities requirements during the Immersion Phase.

*National LEND program website: http://www.aucd.org/template/page.cfm?id=6

Vanderbilt Consortium LEND program website: http://vkc.mc.vanderbilt.edu/vkc/lend/
Academic Policies for Other School of Medicine Degrees

Registration

Academic Load and Credit Hours. The academic load for full-time status in the fall and spring semesters is 8 or more hours. A student who wishes to carry more than 16 hours must secure authorization from the degree program director before registration. Three-quarter-time status is 6 to 7 hours; half-time status is 4 to 5 hours. The summer full-time load is 6 or more hours; three-quarter-time load is 5 hours, and half-time load is 3-4 hours. All full-time students must register each fall and spring semester with no breaks in registration to remain in good standing. Students enrolled at Vanderbilt University School of Medicine must complete required course work at VUSM or a VUSM affiliate institution, unless otherwise explicitly indicated.

Credit hours are semester hours (e.g., a three-hour course carries credit of 3 semester hours). One semester credit hour represents at least three hours of academic work per week, on average, for one semester. Academic work includes, but is not necessarily limited to, lectures, laboratory work, homework, research, class readings, independent study, internships, practica, studio work, recitals, practicing, rehearsing, and recitations. Some Vanderbilt courses may have requirements that exceed this definition.

Changes in Registration. Changes to semester-long courses must be made within the change period (the first ten days of the term). A student may formally withdraw from a course after the end of the change period with the permission of the faculty member, and a grade of W will be given. After the mid-point of the semester, a student is not permitted to withdraw from the course except under certain circumstances. Failing the course is not considered one of the circumstances. Students should also be aware of financial ramifications of dropping a course after the change period. Some programs may allow additional change periods within the term.

Auditing a Course. Auditing is allowed in some programs, but not all. Please see program-specific information in this catalog for more information about whether a specific program allows courses to be audited.

In programs where auditing is allowed, a request must be submitted and approved by both the program director and course instructor. Only students registered for regular courses will be allowed to audit a course. Students who audit are expected to attend class regularly. Audits will be recorded on the student’s transcript. The number of courses that a student may audit during a given semester may be limited by the program director. A grade of AW will be entered onto a transcript when a student withdraws from an audited course after the change period (the first ten days of the term).

Special Students. Special students admitted as non-degree-seeking students may register for selected courses. Students seeking special student status must submit an application to the program offering the course. Approval of the instructor and the program administration is required to take the course. Special students must meet the same admission requirements as the program’s degree-seeking students. Registration for individual classes is contingent upon availability of space in the course.

Dual-degree Students. Students pursuing a dual degree will be required to designate a primary degree program during each registration period.

Grading Policies

Grading. The grading scale will include the following:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>F</td>
<td>No credit</td>
</tr>
</tbody>
</table>

Pass/Fail Grading. Some courses may be designated as pass/fail. The grades for these courses will not be calculated into the GPA unless the final grade is F. Degree-seeking students may not elect to take a graded course as pass/fail. Non-degree-seeking students may be allowed by a program to elect to take a course pass/fail.

Incomplete. The grade I (Incomplete) may be used at the discretion of the instructor in those cases in which the student is not able to complete course work in the normal time. An I that is not replaced by a letter grade within one year may be changed to an F at the discretion of the instructor. Otherwise, the I may become permanent and remain on the transcript as such.

In Progress. The grade IP (In Progress) may be used at the discretion of the instructor as a temporary grade in those cases in which insufficient information is available to assign a final grade. The IP ultimately is replaced by a final, permanent grade.

A Grade of W. The grade of W is entered onto the transcript when a student withdraws from a course (or from the degree program) after the close of the change period (the first ten days of the term) but before the end of the term.

Grade Change Policy. A grade recorded in the University Registrar’s Office (on a transcript) may be changed only upon the written request of the instructor with the approval of the program director. Requests for grade changes may be submitted, by the program director, to the School of Medicine Office of Enrollment Services. This policy includes changing an I to a final grade.

Grade Grievance Procedure. Students should seek redress of a problem with a grade as soon as possible after receiving the grade and in no case later than four weeks after the grade is released. Students with a problem should confer directly with the course director. Every effort should be made to resolve the problem fairly and promptly at this level. If the student cannot resolve the problem through discussion with the course director, the student should formally request an appeal from the degree program director within two weeks of talking with the course director. If the course director is also the degree program director, appeal would be made by the student to the senior associate dean of health sciences education (SADHSE) or his/her designee.

In degree programs with tracks, the track director should be the first level of appeal after the course director, and if the student is not satisfied with the outcome of that appeal, the student should appeal to the program director. In any aforementioned instance, if resolution is not achieved by the degree program director the case will be referred to the SADHSE or his/her designee, who will make the final decision. At each level of review the course’s assessment practices will be reviewed and the individual student’s situation taken into account.

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>F</td>
<td>No credit</td>
</tr>
</tbody>
</table>
Transfer Credit. Only those courses for which a student has received a grade of B or its equivalent will be considered for incoming credit transfer. In general, no more than 6 credit hours earned from an accredited institution may be applied toward degree graduation requirements. Applicants will notify degree program directors, prior to admission, of their intent to petition for transfer credit. Transfer credit is approved at the discretion of the degree program director and then endorsed and processed by the director of student records for the School of Medicine. In some programs, students may petition for approval of additional credits. (See program specific information pertaining to transfer credit below.) Credit will not be given for courses taken in the Vanderbilt University Division of Unclassified Studies. 

Credit for Courses Taken as an Undergraduate. Students may not request credit for course work taken prior to beginning the degree program if the course credit was used to satisfy requirements of the previous degree. Students wishing to transfer in graduate-level credit for previously completed course work must make such a request prior to admission to the program (see Transfer Credit above).

Student Compliance Requirements

All Vanderbilt University School of Medicine students are required to take steps to ensure they are in compliance with the rules and regulations that govern medical student education. Many of these steps are completed on a recurring basis throughout a student’s VUSM career. Students are contacted at appropriate intervals to make them aware of their responsibilities to meet these requirements and to notify them about the process for doing so. Specific requirements vary by degree program. Failure to complete the requirement by the stated deadlines results in the student’s removal from educational activities.

Commencement

The university holds its annual Commencement ceremony following the spring semester. Degree candidates must have completed successfully all curriculum requirements and have passed all prescribed examinations by the published deadlines to be allowed to participate in the ceremony. A student completing degree requirements in a summer or fall semester may participate in Commencement the following May, and ordinarily the degree will be conferred at the end of the term in which requirements are completed. Any student unable to participate in a Commencement ceremony will receive his or her diploma by mail.

Academic Progress and Promotion

School of Medicine degree program students are expected to progress academically through the program at a pace that ensures that students attain current and relevant professional knowledge, skills and aptitudes. Students are expected to maintain satisfactory academic progress at all times. Each program establishes the normal time and maximum time allowed to progress though the program and complete the degree. Since grades are a significant element in determination of satisfactory academic progress, it is the student’s responsibility to be aware of the degree program’s minimum satisfactory grade level for courses to be applied toward degree requirements. In addition, students are responsible for understanding experiential learning (clinical rotations, practica, etc.) requirements and minimum standards of performance required to maintain satisfactory academic performance. (See each program’s degree requirements and academic policies below.)

Each student’s progress is evaluated at least annually by an academic progress review committee. Committee name, size and membership varies by program, but all operate under the supervision of the School of Medicine and the policies contained in this catalog. Committees are populated by faculty members well versed in the program’s degree requirements and in acceptable academic standards and performance for the program and its related profession.

Academic progress review committees review students’ progress and may make the following determinations at each scheduled meeting:

- Satisfactory progress (Good standing and promotion)
- Satisfactory progress with remediation (Good standing and promotion or contingency for promotion)
- Academic probation with remediation (Not in Good Standing—remediation required; promotion or contingency for promotion)
- Dismissal (after failing to successfully remediate)

Students are notified in writing of the committee’s determination if academic progress is not satisfactory. Degree programs’ student support and advisory systems work with committees to facilitate the best possible outcome for all students.

Good Standing

A cumulative grade point average of at least 3.0 is required for graduation. A semester average of at least 3.0 is required to remain in good academic standing. A student whose cumulative grade point average falls below 3.0 may be placed on probation for one semester. If at the end of the semester the grade point average is still below 3.0, the student may be dismissed from the program based on unsatisfactory academic performance. Students may withdraw in lieu of dismissal.

Repeating a Course

Students may be required to repeat a course after having received a grade below the level deemed acceptable for graduation credit by the degree program. In rare instances, in some programs, students may make a request of the program director to re-take a course if doing so would significantly benefit the student’s academic performance and progress. Both courses will be reflected on the transcript, but the second grade earned will be the one used in computing the student’s grade point average. Students should refer to their program handbook for more information about whether the option to retake courses is available in the program.

Probation

Students placed on probation are notified through a letter from the program director and/or the academic progress review committee that outlines the reasons for the probation; the requirements and recommendations for addressing deficiencies; the conditions for removal of probation, including an expected time frame; and actions that will be taken if conditions are not met. Students placed on probation for any reason will be required to complete a specific remediation plan that has been approved by the program director and the academic progress review committee. The remediation plan may include requirements placed...
on the student, such as regular meetings with advisers, elimination of extra-curricular activities that may be interfering with satisfactory academic progress, etc.

All students on probation will be reviewed by the degree program’s director and the academic progress review committee at least once each semester to determine whether satisfactory academic progress has been made. At that time the program’s director and the academic progress review committee may take the following actions:

1. Remove probation: Probation may be removed if students have satisfactorily addressed deficiencies, even if this is before the time frame originally designated by the program’s director and the academic progress review committee.
2. Continue probation: Progress is being made.
3. Recommend dismissal: Performance continues to be unsatisfactory.

Written notification is provided to the student regarding the outcome of this review. Probation is considered an adverse action and may be reported in future graduation verifications and other requests for information.

**Appeal of Probation**

Students may ask the Senior Associate Dean for Health Sciences Education (SADHSE) for reconsideration of any decision for probation. The request must be made in writing within seven calendar days of receiving the decision from the program’s academic progress review committee. The student may meet with or present any additional information in writing to the SADHSE, who will review the information presented by the student, the degree program director, and the deliberations of the academic progress review committee. The SADHSE will make a determination to either uphold the decision, reverse the decision, or request that the academic progress review committee meet for reconsideration of additional information. The SADHSE will notify the degree program director and the academic progress review committee in writing of his or her decision. In the case of a reversal, the SADHSE may require that the student follow requirements and recommendations of the program director and the academic progress review committee for addressing deficiencies.

**Dismissal**

Dismissal for unsatisfactory academic progress will take place only after a student has been given a reasonable probationary period to address deficiencies. Most often, this reasonable period consists of one academic year.

A student may be dismissed at any time for a singular egregious behavior; involvement in a serious incident that is inconsistent with the expectations for students at VUSM; violation of Vanderbilt University or Vanderbilt University Medical Center policy; or demonstrating a pattern of unprofessional behavior. In such cases, the program director and the academic progress review committee consider the situation, including its severity, as quickly as possible and render a recommendation to the dean or the dean’s designee.

In cases where the academic progress review committee is involved, the student may meet with the program director prior to any academic progress review committee meeting to present an explanation, including any mitigating circumstances. The degree program director will present the student’s explanation, as well as any mitigating circumstances, to the academic progress review committee. Alternately, the student may elect to appear before the academic progress review committee in person or to submit in writing his or her explanation and any other information to be considered by the academic progress review committee. A student may also ask a non-committee faculty member to offer information on behalf of him or her at the meeting.

If a recommendation for dismissal is made by the academic progress review committee, the program director presents this recommendation to the dean or the dean’s designee, which is normally the senior associate dean for health sciences education (SADHSE). The dean or SADHSE takes into consideration any mitigating factors presented in writing by the student. The dean/SADHSE may reverse the recommendation if he or she disagrees with the decision. The dean or SADHSE shares his or her decision in writing (accepts dismissal or rejects dismissal) with the program’s academic progress review committee. If the dismissal decision is reversed, the academic progress review committee then considers whether probation or other action is appropriate under the guidelines above (see Probation).

If the dean/SADHSE affirms the recommendation of dismissal, the decision is described in a notice to the student written by the academic review committee chair and the degree program director. This communication is presented to the student, in person whenever possible, by the degree program director. At that time, the degree program director presents the dismissal decision and the following options, in writing, to the student:

1. Voluntary withdrawal from VUSM. The decision to withdraw must be presented in writing by the student to the degree program director within seven (7) calendar days of the program director’s meeting with the student to inform him or her of the decision of dismissal.
2. Dismissal. If the student does not request to withdraw within this seven-(7)-calendar-day window, the dismissal will take effect on the eighth calendar day.
3. Appeal. Appeals must be made in writing to the SADHSE within seven (7) calendar days of the meeting between the degree program director and the student following the dismissal decision. An appeal automatically ends a student’s right to withdraw.
4. If the student is unwilling or unable to meet with the degree program director regarding the dismissal decision, the student will be informed of the decision in writing, and the window of time for the student to communicate his or her preference from the options listed above will run from the date of transmission of the written notice.

**Appeal of Dismissal**

A student who decides to appeal a decision of dismissal must submit a written request to the senior associate dean for health sciences education (SADHSE) within seven (7) calendar days of the dismissal decision. The dean or dean’s designee, usually the SADHSE, assembles and convenes a review panel consisting of at least five (5) members of the School of Medicine executive faculty (from among them a chair is designated) for a hearing within seven (7) calendar days of receipt of the written request from the student, unless the chair of the review panel determines that there are valid reasons to extend this time frame. In this review, the role of the dean or dean’s designee is purely administrative, and he or she has no decision-making authority in this context. In preparation for the review, the SADHSE will make available any relevant information/documentation for the panel’s review. The Assistant Dean for
Health Sciences Education will provide the student information about the appeal process. The student may choose to be present or to make a presentation in writing. Information presented by the student may contain documentation from other students, faculty members, and/or other sources. In addition, the student may request that a faculty member be present and offer information to the review panel. The student may not have other representatives at the review. The chair of the degree program’s academic review committee will attend the review to present the findings of that committee.

If the review panel upholds the decision, the student will be dismissed without the opportunity to withdraw. If the review panel reverses the decision, the review panel will refer the reversal decision to the degree program director, along with its written findings, for presentation to the academic progress review committee, which will consider whether probation is appropriate, and any requirements or conditions that would accompany probation. The review is conducted without the presence of attorneys for either party. However, either party may consult with its own counsel prior to such review or during a break in the proceedings. The decision of the review panel will be final for the school.

**Temporary Suspension**

The School of Medicine reserves the right, through the SADHSE (or designee), to temporarily suspend a student for conduct disrupting or negatively impacting the learning environment, pending the student’s referral to the degree program’s academic progress review committee. The SADHSE will notify the student in writing of the conditions of the temporary suspension. If the student is reinstated, the student will work with the degree program director to address any course requirements not completed during the suspension.

**Leave of Absence**

Students who wish to interrupt their study must request a leave of absence in writing from the program director. Some programs may require additional documentation. The program director will provide a decision regarding the request. A one-time leave of absence may be granted for a maximum of one year for students seeking a master’s degree. A leave of absence may be granted for one year for students seeking a doctoral degree, and on rare occasions a second leave of absence for a period of up to a year may be allowed for doctoral students.

Students taking a leave of absence are responsible for meeting with the program director prior to the leave in order to plan for their course work and timeline for successful degree completion following their return. Students who do not register for classes before the ending date of a leave of absence may be disenrolled and required to request reinstatement to the program. All programs have limits to the time within which all degree requirements must be completed, and it is the student’s responsibility to be aware of these limits.

**Withdrawal from the University**

Students who intend to withdraw from the university for any reason must inform the program director in writing. Lack of notification may result in additional academic or financial penalties beyond those usually incurred when timely notification is provided.

**Degree Requirements—Other School of Medicine Degrees**

**Hearing and Speech Sciences**

All candidates for the doctor of audiology (Au.D.), master of science in speech-language pathology (M.S.–S.L.P.), and master of education of the deaf (M.D.E.) degrees must have satisfactorily completed all residency, academic course, and clinical practica requirements of their respective programs.

**Doctor of Audiology**

*Degree Requirements*

- The candidate for the Au.D. degree will generally spend twelve academic semesters at Vanderbilt and is expected to be enrolled in the School of Medicine during each fall, spring, and summer semester until completion of the degree.

- The normal time frame for completion of required course work for the doctor of audiology degree is four years. If an individual requires additional time due to unusual circumstances (e.g., remediation, personal leave of absence), the degree program may extend the maximum amount of time to complete the degree to five years.

- A minimum of 85 credit hours (including 70 didactic course work credit hours and 15 clinical practicum/externship credit hours) is required for the Au.D.

- All Au.D. students are expected to participate and make good progress in developing clinical skills through clinical practicum throughout their program. The first semester of clinical practicum will involve more observation and guidance than actual hands-on experience. A grade of Pass (P) or Fail (F) will be awarded for the first semester of practicum, primarily based on attendance, punctuality, professionalism, and active engagement in the learning process. In subsequent semesters, clinical supervisors award traditional letter grades (A, B, C, F) for clinical performance/learning, a grade which may be reduced for unexcused absences from either clinic or clinical case conference according to prevailing departmental guidelines. Student performance is reviewed annually, and a failure to appropriately develop clinical skills can result in probationary status which must be alleviated in order to continue in the program.

- Au.D. students must complete a fourth-year clinical externship which begins at the conclusion of the third year and must continue for a minimum of ten months.

- All Au.D. students must complete a capstone project. The doctoral capstone project comprises 6 credit hours taken in years 2 and 3.

**Master of Science—Speech-Language Pathology**

*Degree Requirements*

- The candidate for the M.S.–S.L.P. will spend at least five academic semesters of graduate study at Vanderbilt. Candidates for the M.S.–S.L.P. are expected to be enrolled in the School of Medicine during each fall, spring, and summer semester until completion of their degree requirements.

- The normal time frame for completion of required course work for the master of science in speech-language pathology is two years. If an individual requires additional time due
to unusual circumstances (e.g., remediation, personal leave of absence), the degree program may extend the maximum amount of time to complete the degree to three years.

- For M.S.-S.L.P. students with an undergraduate background in communication sciences and disorders: A minimum of 47 semester hours (including 37 didactic credit hours and 10 clinical practicum credit hours) is required for the master’s degree. For M.S.-S.L.P. students without an undergraduate background in communication sciences and disorders: A minimum of 54 semester credit hours (including 43 didactic credit hours and 11 clinical practicum credit hours) is required. Curriculum requirements, course content, and the number and distribution of credit hours are determined by the M.S.-S.L.P. program faculty.

- Enrollment in clinical practicum is required during each semester of the student’s enrollment. Students must have 25 clock hours of clinical observation of clinical service provision conducted by or supervised by a person with the Certificate of Clinical Competence (CCC) in speech-language pathology from the American Speech-Language-Hearing Association. If this observation has not been met prior to enrollment in the M.S.-S.L.P. program, the student will complete the observation during the first semester before having an opportunity for direct patient contact. During the final semester of enrollment, the student will complete a 10-week full-time externship. Students are expected to have completed a minimum of 400 clinical clock hours prior to initiation of the externship.

Master of Education of the Deaf

Degree Requirements

- The candidate for the M.D.E. degree will spend at least three academic semesters of graduate study at Vanderbilt. Candidates for the M.D.E. degree are expected to be enrolled in the School of Medicine during each fall, spring, or summer semester until completion of the degree.

- The normal time frame for completion of required course work for the master of education of the deaf degree is one to two years, depending on student’s academic background upon entering the program. If an individual requires additional time due to unusual circumstances (e.g., remediation, personal leave of absence), the degree program may extend the maximum amount of time to complete the degree to three years.

- For M.D.E. students on the one-year track, a minimum of 29 semester hours of formal, didactic course work and 8 practicum semester hours is required. Students on the two-year track must complete a minimum of 50 semester hours of formal, didactic course work and 14 practicum semester hours for the M.D.E. degree and endorsement in Special Education Hearing in Pre-K-12. For students not seeking endorsement, a minimum of 44 semester hours of formal, didactic course work and 14 practicum semester hours are required.

- Maymester internship/externship, designed to provide students with a unique opportunity for a three-week intensive practicum working with deaf and hard-of-hearing children, is required for graduation.

- Students must also complete a service obligation experience which provides them with the opportunity to gain an enhanced understanding of the challenges facing children with hearing loss and their families. Service obligations require a minimum of 100 hours during the first year of enrollment. At least half of the hours should involve direct child contact.

Other Programs

Master of Genetic Counseling

The Vanderbilt University Master of Genetic Counseling program has achieved candidacy for accreditation by the Accreditation Council for Genetic Counseling (ACGC) (gecducation.org). Achieving candidate status demonstrates progress towards accreditation. The MGC is currently under review by the ACGC for New Program status. Updates on the status of Vanderbilt accreditation by the ACGC may be found on the ACGC website and on the VUSM website at medschool.vanderbilt.edu/mgc.

Candidates for the M.G.C. spend five academic semesters at Vanderbilt and are expected to be enrolled in the School of Medicine during each fall, spring, or summer semester until completion of the degree.

The normal time for completion of the required coursework for the M.G.C. is 21 months. If an individual requires additional time due to unusual circumstances (e.g., remediation, personal leave of absence), the degree program may extend the maximum amount of time to complete the degree to three years with approval of program leadership.

Course of Study: Vanderbilt M.G.C. students participate in a wide range of activities during their time in the program to prepare them for the American Board of Genetic Counseling (ABCG) certifying exam, including course work, practicum experiences, and research experiences. Course work includes all content areas set forth by the Accreditation Council for Genetic Counseling (ACGC) and includes:

- Genetic Counseling (introduction, advanced, theory, skills development)
- Professional Issues
- Medical Genetics and Genomics
- Laboratory Sciences
- Research Design
- Human Development
- Public Health

In addition to course work, students complete 50 weeks of practicum experience. Over ten 5-week blocks, students work with certified genetic counselors and Ph.D. and/or M.D. geneticists in the ABGC-defined practice areas of adult, cancer, pediatric, and prenatal. Experiences in specialty clinics and genetics laboratories are part of the practica. There is also opportunity to work in industry and philanthropic settings. During practica, students are exposed to natural history, management, and psychosocial issues related to a broad range of genetic conditions. The breadth and depth of cases during the practica exceeds the standards set forth by the ACGC. The distribution of core cases is consistent with the ABGC practice area guidelines.

Vanderbilt M.G.C. students are required to complete a formal master’s thesis during their 21 months of training. Students identify a research adviser during their first semester. The project and its timeline evolve during the first year as students complete first-year course work and have regular meetings with their advisers. At the end of the first year, each student presents a thesis proposal to the Review Committee. In the summer after the first year, the student begins collecting and analyzing research data. By the end of the second year, the student must complete a manuscript suitable for submission to a peer-reviewed
journal. Publication is encouraged; however, not a graduation requirement.

More information about the Vanderbilt M.G.C. program is available online, at medschool.vanderbilt.edu/mgc.

Progress and Promotion: In order to be promoted, M.G.C. students must maintain satisfactory academic progress in all program areas (course work, thesis development, and clinical skills). Academic progress of each M.G.C. student is reviewed by the M.G.C. Promotion Committee twice per year. During these meetings, one of the following promotion determinations is also made for each student:

- Satisfactory progress (good standing and promotion)
- Satisfactory progress with remediation (good standing and promotion [or contingency for promotion])
- Academic probation (not in good standing—remediation required; promotion or contingency for promotion)
- Dismissal (after failing to successfully remediate)

Students are notified in writing of the Promotion Committee’s determination if academic progress is not satisfactory. The M.G.C. program’s student support and advisory systems work with students to provide necessary resources to assist with remediation and help the student regain satisfactory progress toward the degree.

Graduation Requirements: Requirements for completion of the M.G.C. are as follows:

- Minimum of 60 hours of required course work, with a grade of B– or better in each course);
- Successful completion of required practica (per applicable ACGC and ABGC guidelines);
- Satisfactory completion of thesis project.

Graduates of ACGC accredited programs are eligible to apply for Active Candidate status from the ABGC and apply to sit for the certifying exam. Please visit ABGC.net for details regarding the certification exam.

Master of Public Health

Degree Requirements

- Candidates for the M.P.H. degree must complete 42 academic credit hours of course work over five academic terms. The 42 credit hours include didactic core and track-specific courses, as well as courses associated with the public health practicum and thesis.

The core courses cover content in epidemiology, biostatistics, social and behavioral sciences, environmental health, health services administration and policy, and public health ethics.

- In addition to the didactic course work, students must complete a public health practicum and thesis.

The public health practicum is a supervised practical field experience designed to provide students the opportunity to develop and apply the knowledge and skills acquired in the academic program in a public health agency or other environment in which a public health function is performed. Students work with the practicum director on an individual basis to identify, arrange, and complete a satisfactory field experience that fulfills the program’s practicum requirements.

The thesis is a substantive and original body of work that allows students to synthesize and integrate knowledge from their public health course work and practicum experiences, apply it to a particular topic area, and communicate their ideas and findings through a scholarly written product. The thesis represents the culmination of the student’s educational experience in the Vanderbilt M.P.H. program.

- Students receive regular track-specific academic advising, as well as guidance and mentorship for the practicum and thesis. Satisfactory completion of both the public health practicum and the thesis is required for all students.

M.P.H. Academic Policies

- Up to 15 academic credit hours of prior graduate-level course work from other schools at Vanderbilt or other accredited universities may be applied to the required 42 credit hours needed for the degree, conditional upon the approval of the Admission Committee and the relevant course directors.

- Auditing is not permitted in M.P.H. program courses. Students in the M.P.H. program may audit courses offered by other departments and programs with the approval of the course instructor.

- Students who receive a final course grade of C+ or lower may be required to retake the course or complete additional course requirements before progressing in the program.
• The normal time to complete the M.P.H. is two years. The maximum time allowed to complete the degree is four years, unless there are unusual circumstances which merit an extension of this limit.

Master of Science in Applied Clinical Informatics

Degree Requirements

The M.S.A.C.I.'s goal is to develop clinical informaticians who will be capable of developing and leading innovative applications of information technology and information systems that address clinical, research, and public health priorities. The program will provide a 36-credit hour curriculum in 21 months, with a course work intensive first year followed by a second year devoted to a capstone project. The curriculum emphasizes a deep theoretical and practical understanding of the care process, informatics concepts, information technologies, computer science, and the changing social, organizational, and economic context in which health care is delivered. This understanding will be developed through course work, over 240 hours of practicum experience that uses real HIT data and systems and health care contexts, and a mentored capstone project. The degree program will provide physicians with didactic and experiential training in alignment with ACGME guidelines for Clinical Informatics fellowships.

The normal time frame for completion of required course work for the master of science in applied informatics is 21 months. The maximum time frame for completion of this degree is three years.

Didactics

Expert faculty who comprise the largest biomedical informatics department in the U.S. will lead nine MSACI courses, which include the core content of the ABMS subspecialty certification:

• Introduction to Clinical Informatics
• Health Information Systems and Applications
• The Health System
• Clinical Information Systems
• Clinical Decision Support
• Clinical Workflow
• Data Standards
• Information System Lifecycle
• Management and Organizational Change

Practicum Experience

A practicum experience will have the following characteristics: Require a minimum of 240 clock hours effort to be completed during year 2 and can be satisfied in highly flexible ways, e.g., at VUMC, at home institution or other site (with M.S.A.C.I. program approval). The trainee must be embedded (i.e., assigned to participate as a member) in an interdisciplinary team that is addressing a significant clinical informatics challenge. This includes attending regular team meetings and participating in analysis of issues, planning, and implementation of recommendations from the team. The interdisciplinary teams must include physicians, nurses, other health care professionals, administrators, and information technology/system personnel, as appropriate.

Capstone Project

A required capstone project running throughout the fellowship will provide students with knowledge and skills required to design and conduct applied research studies to evaluate the efficacy of informatics applications in the clinical environment. Based on personal career objectives and informatics challenges that they identify in practica, the capstone project will have the flexibility to be completed as a cohort, a sub-cohort group, or individually, depending on its design and the needs of our learners. The project will begin in the first year and continue in the second year. Each student will have a project mentor from among the DBMI faculty, as well as a practice mentor within his/her home department/organization.

Master of Science in Clinical Investigation

Degree Requirements

• Candidates for the M.S.C.I. must complete 35 semester credit hours of the core course work.
• Completion of a final project in the form of a submission ready, extramural grant or an original article for publication in a peer-reviewed journal is also required.
• Students who are unable to complete a grant or manuscript may submit a thesis. The thesis should include a brief introduction explaining why a grant or manuscript could not be submitted. No oral presentation is required. The thesis should include a brief statement of the student’s role in the work to be described in the research report and a 10-to-15-page report outlining the hypothesis tested, background and significance of the work, the experimental approach and methods, data analysis/sample size calculations, anticipated results and pitfalls, results to date, interpretation of results, discussion of results, and future plans. The thesis is reviewed and approved by the Promotion Committee.

Professional Programs in Medical Physics

Professional Doctorate in Medical Physics

Degree Requirements

• Candidates for the D.M.P. must complete a total of 92 semester credit hours. Of this total, 50 semester credit hours will be in didactic classroom and laboratory instruction, with an emphasis on either diagnostic imaging or radiotherapy physics.
• The normal time frame for completion of required course work for the doctorate in medical physics is four academic years. The maximum time for completion of this degree is no more than five years.
• Candidates will complete an independent study project for six semester credit hours.
• Students are required to complete 30 semester credit hours of professional clinical rotations. Clinical training will total a minimum of 24 months. Limited introductory clinical training called practicum (approximately three full-time equivalent months) will occur in year 2; students will receive 6 professional credit hours for the successful completion of the practicum.

Master of Science in Medical Physics

Degree Requirements

• Candidates for the M.S.M.P. must complete a total of 38 semester credit hours. Of this total, 32 semester credit hours will be in didactic classroom and laboratory instruction with an emphasis on either diagnostic imaging or radiotherapy physics.
The normal time frame for completion of required coursework for the master of science in medical physics is two academic years. The maximum time for completion of this degree is no more than three years.

Students may choose a thesis or non-thesis option in either discipline.

Students in the non-thesis option are required to complete 6 semester credit hours of professional clinical rotations or practicum. The practicum is specific to the areas of clinical diagnostic and nuclear medicine imaging or radiotherapy treatment planning and associated techniques. Students in the non-thesis option may choose to participate in a 1–2 semester credit hour independent study.

Students in the thesis option must complete a master’s thesis by taking 6 semester credit hours of independent study.
Honors and Awards

Alpha Omega Alpha
A chapter of this medical honor society was established by charter in the School of Medicine in 1923. Not more than one-fourth of the students of the fourth-year class are eligible for membership, and no more than 17 percent (one-sixth of the graduating class) can be nominated per class.

The society has for its purpose the development of high standards of personal conduct and scholarship and the encouragement of research. Students are elected into membership on the basis of scholarship, character, and originality.

Gold Humanism Honor Society
A chapter of this honor society was founded in 2015 in an effort to recognize, support, and promote the values of humanism and professionalism in medicine. The number of members eligible to be nominated and selected will be up to 15 percent of the medical school class. Students are elected into membership by showing that they are exemplars of integrity, excellence, compassion, altruism, respect, empathy, and service.

Founder’s Medal
The Founder’s Medal, signifying first honors, was endowed by Commodore Cornelius Vanderbilt as one of his gifts to the university. This medal is awarded to the student in the graduating class of the School of Medicine who, in the judgment of the faculty, has achieved the strongest record in the several areas of personal, professional, and academic performance in meeting the requirements for the doctor of medicine degree during four years of study at Vanderbilt.

Class Day Awards
AMERICAN ACADEMY OF NEUROLOGY MEDICAL STUDENT PRIZE FOR EXCELLENCE IN NEUROLOGY. This award is to recognize medical students for excellence in clinical neurology.

BEAUCHAMP SCHOLARSHIP. Endowed and awarded to the student showing the greatest progress in the field of psychiatry.

LONNIE S. BURNETT AWARD IN OBSTETRICS AND GYNECOLOGY. This award is given to the student demonstrating superior performance and who exemplifies the qualities of dedication, leadership, compassion, and integrity in the field of Obstetrics and Gynecology.

DIXON N. BURNS AWARD IN MEDICAL ETHICS. This is an award given by the Center for Biomedical Ethics to the graduating medical student who has, through a written essay, demonstrated unusual ability in identifying and analyzing ethical issues presented in either clinical or research contexts.

THE GEORGE AND BARBARA BURRUS MEDICAL MISSIONS AWARD. This award is presented to a student who has demonstrated exceptional interest and participation in providing medical care to the poor during medical school either locally or abroad.

THE GEOFFREY DAVID CHAZEN AWARD. This award for innovation in medical education was established to recognize a student, resident, fellow, or faculty member who has made special contributions to the educational programs of the Vanderbilt University School of Medicine through the development and implementation of effective innovation in educational approach.

AMOS CHRISTIE AWARD. This award recognizes the student in the graduating class who has demonstrated the outstanding qualities of scholarship and humanity embodied in the ideal pediatrician.

JOHN G. CONIGLIO PRIZE IN BIOCHEMISTRY. This award presented to a medical student who has distinguished him/herself in Biochemistry. Both accomplishments in biomedical research and performance in Biochemistry courses are considered in evaluating candidates for this award.

This award was established by friends of Professor Coniglio on the occasion of his retirement to honor his many contributions to medical education at Vanderbilt.

OSCAR B. CROFFORD AWARD FOR DIABETES/ ENDOCRINE RESEARCH. This award is presented by the Division of Diabetes, Endocrinology, and Metabolism and the Vanderbilt Diabetes Center to the graduating medical student who has performed outstanding research in the area of diabetes and endocrinology. This award was established to honor Dr. Oscar B. Crofford for his contributions to the diabetes research at Vanderbilt and throughout the world.

DEAN’S AWARD. Presented to medical students distinguished by outstanding service to the School of Medicine and the community.

THE DEAN’S AWARD FOR RESEARCH. This award is presented to the graduating medical student who best exemplifies the attributes that lead to success in basic science or clinical research, namely creativity, dedication, productivity/multiple publications and careful diligence.

EXCELLENCE IN EMERGENCY MEDICINE. The award for excellence in emergency medicine is given on behalf of the Society for Academic Emergency Medicine. This award recognizes a medical student who demonstrated outstanding ability and commitment to the specialty of emergency medicine at Vanderbilt University Medical Center.

EXCELLENCE IN INFECTIOUS DISEASES. This award is presented by the Divisions of Infectious Diseases in the Departments of Medicine and Pediatrics to the student who has demonstrated outstanding aptitude and performance in clinical and investigative efforts in infectious diseases or microbiology.

EXCELLENCE IN PUBLIC HEALTH AWARD. This award is distributed by the Physicians Professional Advisory Committee (PPAC) of the United States Public Health Service (USPHS). The purpose is to recognize medical students who conduct public health work in their community and exemplify the USPHS and its mission to protect, promote, and advance the health and safety of our nation.

GERALD FENICHEL AWARD IN NEUROLOGY. Dr. Gerald Fenichel, professor of neurology and pediatrics, founded the Department of Neurology at Vanderbilt University Medical Center and served as chairman from 1969 to 2001. As one of the founders of the Child Neurology Society, his contributions to the fields of neurology and child neurology are immeasurable. This award is presented to a graduating medical student entering neurology or child neurology who has demonstrated outstanding aptitude for clinical neurology and a devotion to patient care.

DAVID R. FREEDY MEMORIAL AWARD. This award was established to honor the memory of David Richard Freedy, a member of the Class of 1993. It is given to the student whose character, integrity, and courage provide inspiration to others and who has been dedicated to improving and promoting community life.

J. DONALD M. GASS AWARD IN OPHTHALMOLOGY. This award is established in honor of Dr. J. Donald M. Gass, a graduate of Vanderbilt University School of Medicine, Class of 1957 and a renowned medical retina specialist. This award is given to a student who demonstrates excellence in ophthalmic education and research.
GLASGOW–RUBIN CERTIFICATE OF COMMENDATION. This certificate is presented in recognition of women medical students who graduate as honor graduates, with special recognition to any female who is the top graduate. It serves to reaffirm the American Medical Women’s Association’s commitment to encouraging their continuing achievement.

JAMES T. GWATHMEY PRIZE IN ANESTHESIOLOGY. This award is presented to the graduating medical student who most clearly demonstrates the potential for excellence in academic anesthesiology. It is named after Dr. James Taylor Gwathmey, a former Vanderbilt medical student who graduated in 1899 and went on to lead the creation of a new medical specialty called anesthesiology.

PAULA C. HOOS AWARD. The first-year class presents this award in recognition of student teaching excellence in the basic sciences and to express appreciation for the assistance of members of the graduating class.

HOSPITAL AWARD OF EXCELLENCE. This award recognizes the fourth year medical student by the chief residents of the services as having contributed most toward excellent patient care by demonstrating sensitivity, compassion, and concern in clinical responsibilities to patients of Vanderbilt Medical Center.

RICHARD B. JOHNSTON JR. AWARD. This award is presented to a graduating student entering pediatrics who has demonstrated excellence in academic scholarship and an extraordinary commitment to clinical medicine exemplifying the highest professional standards of the physician-scientist.

RUDOLPH H. KAMPMEIER PRIZE IN MEDICINE. The Kampmeier Prize is presented by the Department of Medicine to the graduate who, in the judgment of the faculty, best combines high academic achievement with clinical excellence, original scholarship or research, and demonstrated potential for an academic career.

THE KAUFMAN PRIZE IN MEDICINE. This award honoring J. Kenneth Kaufman, M.D. ’39, is presented to a graduating medical student who has demonstrated qualities of humaneness, dedication, and unselfish service in the study of medicine and will apply these qualities in medical practice.

LAURA KNOX HUMANITARIAN AWARD. This award recognizes a graduating student in the Department of Hearing and Speech Sciences who has demonstrated a history of outstanding humanitarian endeavor throughout the degree program.

RUSSELL J. LOVE HONORS IN SPEECH-LANGUAGE PATHOLOGY. Given by the faculty in the Department of Hearing and Speech Sciences for outstanding clinical and academic achievement in speech-language pathology.

THE TOM NESBITT AWARD. This award is presented by the Nashville Academy of Medicine to honor the outstanding service of Tom Nesbitt, M.D., a member of the academy and the 133rd president of the American Medical Association. This award is presented to the graduating medical student who demonstrates exemplary character and leadership and has an understanding of and appreciation for organized medicine.

OHDE-GRANTHAM RESEARCH AWARD IN HEARING AND SPEECH SCIENCES. This award is given by the faculty in the Department of Hearing and Speech Sciences for recognition of excellence in research.

DAVID N. ORTH AWARD IN ENDOCRINOLOGY. This award is presented by the Division of Diabetes, Endocrinology, and Metabolism and the Endocrine Society, the largest professional association devoted to all aspects of endocrinology, to a graduating medical student who has demonstrated outstanding performance in clinical or research endocrinology. The award honors Dr. David N. Orth for his contributions to and leadership in endocrinology. He served as director of Vanderbilt’s Endocrinology Division and as president of the Endocrine Society.

THE ORTHOPAEDIC SURGERY CLERKSHIP AWARD. This award is presented by the Department of Orthopaedic Surgery to the student who has excelled in both the third and fourth year orthopaedic clerkships, and who has demonstrated outstanding potential in the field of orthopaedic surgery. CANBY ROBINSON SOCIETY AWARD. With nominations generated from the fourth year class, this award is presented to a member of the graduating class who possesses those intangible qualities of common sense, knowledge, thoughtfulness, personal warmth, gentleness and confidence which combine to make the “Ideal Doctor.”...the person fellow classmates would most like to have as their personal physician.

ROENTGEN AWARD. This award is given to a graduating medical student who has made important contributions in one of the radiological sciences during four years of study. Named for Wilhelm Conrad Roentgen, a pioneer in diagnostic radiology, the award recognizes discoveries in either clinical or research areas.

JAY W. SANDERS HONORS IN AUDIOLOGY AWARD. Given by the faculty in the Department of Hearing and Speech Sciences for outstanding clinical and academic achievement in audiology.

THE SCHOOL OF MEDICINE AWARD OF DISTINCTION. This award is presented to the student who has demonstrated outstanding leadership abilities in service to the School of Medicine.

THE H. WILLIAM SCOTT JR., PRIZE IN SURGERY. This award is presented to the graduating medical student who exemplifies the qualities of leadership, performance, and character reflecting the ideal surgeon.

JOHN L. SHAPIRO AWARD FOR EXCELLENCE IN PATHOLOGY. This award, given upon action of the Department of Pathology, recognizes outstanding student performance in pathology. It is given annually or otherwise depending upon action by the department and honors the memory of Dr. John L. Shapiro, who was Professor and Chairman of the Department of Pathology from 1956 to 1971. Dr. Shapiro remained an active participant in a variety of university and community activities, until his death on July 15, 1983.

MILDRED T. STAHLMAN AWARD. This award honoring the pioneering spirit and achievements of Vanderbilt pediatrician Mildred Stahlman is presented to the graduating student entering pediatrics whose performance exemplifies the highest standards of leadership, professionalism, and commitment to improving the lives of children.

TENNESSEE ACADEMY OF FAMILY PHYSICIANS OUTSTANDING STUDENT IN FAMILY MEDICINE AWARD. This award is presented in recognition of dedication to the high ideals of family medicine.

THE LEONARD TOW HUMANISM IN MEDICINE AWARD. PRESENTED BY THE ARNOLD P. GOLD FOUNDATION. This award is given to a graduating student and a faculty member who demonstrate compassion and empathy in the delivery of health care, and who engender trust and confidence in both their patients and colleagues while adhering to professional ethical standards.

STEN H. VERMUND AWARD IN GLOBAL HEALTH. This award recognizes the graduating medical student who has most demonstrated a strong commitment to improving the health of the people of or from a low-middle-income country through distinguished scholarship, education, and/or contributions to the improvement of clinical care. The award was established in 2017 to honor Dr. Sten H. Vermund, who was the founding director of the Vanderbilt Institute for Global Health.

THE ALBERT WEINSTEIN PRIZE IN MEDICINE. The Weinstein Prize in Medicine is awarded to a student who has demonstrated high academic achievement, superior clinical competence, and the qualities of dedication and professionalism that characterize a good physician.

DAVID L. ZEALEAR PH.D. OTOLARYNGOLOGY SCHOLAR–INITIATIVE AWARD. This award is presented to a medical student who excels beyond clinical competence and who has become distinguished for outstanding effort towards the academic mission of otolaryngology—research, teaching, and/or outreach.
Financial Information

Financial Information for Medical Students

Tuition for the academic year 2018/2019 is $55,608. The annual expense of a first-year student in the School of Medicine is estimated to be $89,796.

Tuition and fees are set annually by the Board of Trust and are subject to review and change without further notice.

2018/2019

The following costs are included with tuition:
- Professional liability insurance, student long-term disability insurance, student health service, and verifications.

The following fees are assessed individually and separate from tuition:
- Application fee (to accompany secondary application) $85
- Student activities and recreation fee 557
- Student health insurance 3,162
- Transcript fee (one time only) 100

Payment of Tuition and Fees

All regularly enrolled medical students must pay the full tuition each year. There will be no exception to this requirement. Graduate students who enroll in courses in the medical curriculum for credit toward an academic degree and who later become candidates for the doctor of medicine degree may be required to pay the full tuition as indicated above. One half of tuition, fees, and other university charges are due and payable by 31 August. The second half of tuition, fees, and other university charges are due and payable by 31 January. Additional information can be found at finance.vanderbilt.edu/stuaccts.

Refund of Tuition

Students who withdraw officially or who are dismissed from the university for any reason after the beginning of a term may be entitled to a partial refund in accordance with the schedule shown below. No refund will be made after the tenth week in any term.

<table>
<thead>
<tr>
<th>Withdrawal prior to the end of</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st full week</td>
<td>100%</td>
</tr>
<tr>
<td>2nd full week</td>
<td>90%</td>
</tr>
<tr>
<td>3rd full week</td>
<td>85%</td>
</tr>
<tr>
<td>4th full week</td>
<td>80%</td>
</tr>
<tr>
<td>5th full week</td>
<td>75%</td>
</tr>
<tr>
<td>6th full week</td>
<td>65%</td>
</tr>
<tr>
<td>7th full week</td>
<td>60%</td>
</tr>
<tr>
<td>8th full week</td>
<td>50%</td>
</tr>
<tr>
<td>9th full week</td>
<td>45%</td>
</tr>
<tr>
<td>10th full week</td>
<td>40%</td>
</tr>
</tbody>
</table>

No refund after the 10th full week.

Late Payment of Fees

Charges not paid by 31 August will be automatically deferred, and the student’s account will be assessed a monthly late payment fee at the following rate: $1.50 on each $100 that remains unpaid after 31 August ($5 minimum). An additional monthly late payment fee will be assessed unless payment is received in full on or before the end of each month, and late payment fees will continue for each month thereafter based on the outstanding balance unpaid as of the end of each month. All amounts deferred are due not later than 1 November for fall semester and 1 April for spring semester. Graduating students are not allowed to defer charges that are billed in advance for the final semester.

Financial Clearance

Students may not be allowed to register for any term if they have outstanding unpaid balances for any previous term. No transcript, official or unofficial, will be issued for a student who has an outstanding balance until the account has been paid. Diplomas of graduating students may be withheld until all bills are paid.

International students must provide documentation of having funds sufficient to meet all tuition, mandatory fees, and living expenses for the anticipated period of enrollment before a visa will be issued. Information will be provided by the university Office of International Student and Scholar Services.

Activities and Recreation Fees

The required student activities and recreation fees entitle students to use the facilities of Sarratt Student Center and the Student Recreation Center. The fees also cover admission to certain social and cultural events and subscriptions to certain campus publications. Specific information on these fees is published annually in the Vanderbilt University Student Handbook. By payment of an additional fee, students and their spouses may use their identification cards for admission to athletic events.

Professional Liability Insurance

Students will be automatically covered with professional liability insurance, required of all enrolled medical students, at the time of registration. Details of the policy are available at the university student insurance office, and students are encouraged to familiarize themselves with these details and with their responsibilities in this regard.

Students are covered whether they are at the Vanderbilt-affiliated hospitals (Vanderbilt University Medical Center, Nashville Veterans Administration Hospital, or Saint Thomas Health-affiliated hospitals) or elsewhere as a “visiting student,” providing that (1) the clerkship or other educational experience has prior approval from the School of Medicine as course work for credit, and (2) the activities within this experience are consonant with the student’s level of training and experience and are performed under the supervision of appropriate faculty and/or staff.

Disability Insurance

Students will be automatically covered with long-term disability insurance, required of all enrolled medical students, at the time of registration. Details of the policy can be found at https://medschool.vanderbilt.edu/financial-services/insurance.
Student Health Insurance

All degree-seeking students registered for 4 or more hours at Vanderbilt are required to have adequate hospitalization insurance coverage. The university offers a sickness and accident insurance plan that is designed to provide hospital, surgical, and major medical benefits. A brochure explaining the limits, exclusions, and benefits of insurance coverage is available at gallagherstudent.com. Additional information is also available at finance.vanderbilt.edu/stuaccts/g_health.html.

Student Health Service Costs

Student health service costs include required immunizations and health screening tests.

Verification Costs

Verification costs cover all required verification processes including criminal background checks and drug screens.

Transcript Fee

All new students entering Vanderbilt for the first time are charged a one-time transcript fee for official university transcripts.

Financial Assistance

Education leading to the doctor of medicine degree requires a careful consideration of financial commitment by prospective students and their families. Financial planning is an important part of the student’s preparation for medical school.

Scholarships

The following are School of Medicine Institutional Scholarships. The School of Medicine is grateful to its donors for their support.

THE JAMES T. AND OLIVIA R. ALLEN SCHOLARSHIP FUND was established in 1993 by Dr. James T. Allen, M.D. 1942, to provide financial support based on need for deserving students at the School of Medicine.

THE ALPHA KAPPA KAPPA SCHOLARSHIP FUND was established in 1969 by the Alumni Board of Directors of the Alpha Kappa Kappa fraternity to provide financial support for individual medical student needs, primarily through provision of funds to help meet tuition cost.

THE LUCILE R. ANDERSON SCHOLARSHIP FUND was established in 1991 by Dr. Lucile Russell Anderson, M.D. 1933, to provide financial support for deserving students at the School of Medicine.

THE SUZ AND NELSON ANDREWS SCHOLARSHIP was established in 2001 by Nelson Andrews, B.A. 1950, and Sue Adams Andrews, B.A. 1951, to provide financial support based on need for students at the School of Medicine.

THE BAKER-LEONARD SCHOLARSHIP FUND was established in 2002 by Quentin B. Leonard to provide financial support for deserving graduate students at the School of Medicine.

THE SOJA PARK BENNETT M.D. SCHOLARSHIP was established in 2015 by Soja Park Bennett, M.D. 1968, to provide financial support based on need or merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE GRANGER BUSBEE III SCHOLARSHIP was established in 1990 by Dr. and Mrs. Brandon Busbee to provide financial support based on need to deserving students at the School of Medicine.
THE 1943 SCHOOL OF MEDICINE CLASS SCHOLARSHIP DECEMBER FUND was established in 1992 by multiple donors in the School of Medicine Class of 1943, December, to provide financial support based on need for deserving students at the School of Medicine.

THE SCHOOL OF MEDICINE CLASS SCHOLARSHIP MARCH FUND was established in 1992 by multiple donors in the School of Medicine Class of 1943, March, to provide financial support based on need for deserving students at the School of Medicine.

THE 1946 SCHOOL OF MEDICINE CLASS SCHOLARSHIP FUND was established in 1996 by multiple donors to provide financial support for deserving students at the School of Medicine.

THE CLASS OF 1947 SCHOLARSHIP was established in 1988 by multiple donors to provide financial support based on need for deserving students at the School of Medicine.

THE 1953 SCHOOL OF MEDICINE CLASS SCHOLARSHIP FUND was established in 2010 by multiple donors to provide financial support based on need for deserving medical students at the School of Medicine.

THE 1962 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors to provide financial support for deserving students at the School of Medicine.

THE 1963 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors from the Class of 1963 to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1964 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 1989 by multiple donors to provide financial support for students at the School of Medicine.

THE 1965 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2013 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1967 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2011 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1968 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2013 through the bequest of Elise Moss Neeld, B.A. 1963, M.D. 1968, to provide financial support for students at the School of Medicine.

THE 1969 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2013 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1971 SCHOOL OF MEDICINE CLASS SCHOLARSHIP FUND was established in 2012 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1972 SCHOOL OF MEDICINE CLASS SCHOLARSHIP FUND was established in 2013 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1974 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2014 by various donors to provide financial support based on need or merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE 1975 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2010 by various donors to provide financial support based on need for deserving students at the School of Medicine.

THE 1976 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1978 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2007 by multiple donors from the Class of 1978 to provide financial support based on need for deserving students at the School of Medicine.

THE 1979 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2010 by multiple donors to provide financial support based on need for deserving students at the School of Medicine.

THE 1981 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors from the Class of 1981 to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1982 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2011 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1984 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2014 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1986 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2011 by Rachel Lenox Mace, M.D. 1986, and Gerald F. Mace, J.D. 1985, to provide financial support based on need for deserving students at the School of Medicine.

THE 1987 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors from the Class of 1987 to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1988 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2008 by multiple donors from the Class of 1988 to provide financial support based on need or merit for deserving students in the School of Medicine.

THE 1989 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2010 by multiple donors to provide financial support based on need for deserving students at the School of Medicine.

THE 1990 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors from the Class of 1990 to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1991 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by various donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1992 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors from the Class of 1992 to provide financial support based on need or merit for deserving students at the School of Medicine.

THE DAVID FREEDY 1993 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 1992 by multiple donors to provide financial support based on need for deserving students at the School of Medicine.

THE 1994 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2013 by multiple donors to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 1997 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors from the Class of 1997 to provide financial support based on need or merit for deserving students at the School of Medicine.

THE 2001 SCHOOL OF MEDICINE CLASS SCHOLARSHIP was established in 2012 by multiple donors from the Class of 2001 to provide financial support based on need or merit for deserving students at the School of Medicine.

THE SMILEY BLANTON SCHOLARSHIP FUND was established in 1973 through a bequest gift from Margaret Gray Blanton to provide scholarship support for students in the Department of Psychiatry at the Vanderbilt University School of Medicine.

THE ROBERT D. COLLINS M.D. SCHOLARSHIP FUND was established in 1996 by multiple donors to provide financial support for students at the School of Medicine.

THE COMMONWEALTH FUND SCHOLARSHIP ENDOWMENT was established by the Commonwealth Fund to provide financial support based on need for deserving students at the School of Medicine.

THE MARVIN B. AND MILDRED G. CORLETTE SCHOLARSHIP was established in 2003 by Marvin B. Corlette, B.A. 1930, M.D. 1933, to provide financial support for students at the School of Medicine.
THE LOUISE WILLIAMS COUCH MEMORIAL SCHOLARSHIP was established in 1962 by Dr. Orrie A. Couch to provide financial support for students at the School of Medicine.

THE DEBORAH AND C. A. CRAIG II MEDICAL SCHOLARSHIP FUND was established in 1992 by C. A. Craig II, B.A. 1951, and his wife, Deborah Wallace Craig, B.S. 1969, to provide financial support for talented and deserving students pursuing an M.D. degree at the School of Medicine.

THE JACK DAVIES SCHOLARSHIP FUND was established in 1991 by multiple donors to provide financial support for medical students at the School of Medicine.

THE JOE C. DAVIS SCHOLARSHIP was established in 1986 by an anonymous donor to provide financial support based on need and merit for students at the School of Medicine.

THE J.T. AND MARY P. DAVIS SCHOLARSHIP FUND was established in 1996 by J.T. Davis, B.A.1928, M.D. 1931, to provide scholarship support to deserving students at the School of Medicine.

THE JOY AND JOHN W. DIDCOCT SCHOLARSHIP was established through the estate of Joy C. Didcoct, G.N. 1938, and John W. Didcoct, B.A. 1933, M.D. 1937, to provide financial support based on need and merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE ANNETTE SCHAFFER ESKIND SCHOLARSHIP was established in 2011 by Annette Schaffer Eskind to provide financial support based on need or merit for deserving students at the School of Medicine.

THE HERBERT AND FLORENCE ESKIND MEMORIAL SCHOLARSHIP was established in July 1971 by Mrs. Herbert Eskind, A. 1928, and family to provide financial support based on need for deserving students at the School of Medicine.

THE ROBERT SADLER-WILLIAM EVERS SCHOLARSHIP FUND was established in 1967 by Mr. and Mrs. W. Fred Delay to provide financial support for worthy students at the School of Medicine.

THE RICK V. N. FERRINI MEDICAL SCHOLARSHIP was established in 2018 by Divya and Vino Ferrini to provide financial support based on need or merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE J. F. FOX MEDICAL SCHOOL SCHOLARSHIP FUND was established in 1967 through the estate of Mrs. Hallie Fox to provide financial support based on need and merit for deserving students at the School of Medicine.

THE THOMAS F. FRIST, SR., M.D. SCHOLARSHIP was established in 2006 by Mr. and Mrs. H. Lee Barfield to provide financial support for deserving students at the School of Medicine.

THE GHERT-ROUSSEAU FAMILY SCHOLARSHIP FUND was established in 2010 by Michelle A. Ghert, M.D. 1996, to provide financial support for deserving medical students at the School of Medicine.

THE D. G. GILL SCHOLARSHIP FUND was established in 1982 by Gordon Nelson Gill, B.A. 1960, M.D. 1963, Richard Hamilton Gill, B.A. 1962, and Charles Leigh Gill to provide financial support based on need for deserving students at the School of Medicine.

THE FRED GOLDNER M.D. SCHOLARSHIP quasi account was established in 2013 to receive matching gifts from the Mary K. Parr Scholarship Matching Gift Program that was established to inspire donors to make a gift for scholarships at the School of Medicine.

THE DRS. FRANK LUTON AND CLIFTON GREER SCHOLARSHIP was established in 1965 through the estate of Clifton Greer, M.D., 1951, to provide financial support based on need for students at the School of Medicine.

THE HARRY J. GUFFEE SCHOLARSHIP FUND was established in 1991 by the Williamson Medical Center to provide financial support for deserving students at the School of Medicine.

THE SCOTT AND TRACIE HAMILTON SCHOLARSHIP was established in 2012 by the Pioneer Fund to provide financial support based on need for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE GLENN AND VIRGINIA HAMMONDS SCHOLARSHIP was established in 1984 by Dr. R. Glenn Hammonds, B.A. 1942, M.D. 1944, to provide financial scholarship support for deserving students at the School of Medicine.

THE FRANK M. HANDLEY MEDICAL SCHOOL SCHOLARSHIP was established in 1999 through the estate of Frank M. Handley, J.D. 1928, to provide financial support for students at the School of Medicine.

THE EMILY AND H. CAMPBELL HAYNIE SCHOLARSHIP was established in 2002 through a bequest from Harold Campbell Haynie, B.A. 1934, to provide financial support for deserving students at the School of Medicine.

THE MAX HOLLORAN SCHOLARSHIP was established in 1990 by multiple friends and a family member from the Class of 1990 to provide financial support for deserving students at the School of Medicine.

THE HARRY R. JACOBSON M.D. AND JAN JACOBSON SCHOLARSHIP was established in 2004 through the estate of Grace McVeigh, B.A. 1925, to provide financial support based on need for deserving students at the School of Medicine.

THE ELIZABETH R. KEREE AND DR. JACK KEFE III HONOR SCHOLARSHIP was established through the estate of Elizabeth R. Keeve and Jack E. Keeve III, B.A. 1939, M.D. 1943, to provide financial support based on merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE HOLLIS E. JOHNSON AND FRANCES SETTLE JOHNSON SCHOLARSHIP FUND was established in 1990 by Dr. Hollis E. Johnson, M.D. 1921, to provide financial support for worthy students at the School of Medicine.

THE ERNEST G. AND MIRIAM H. KELLY SCHOLARSHIP FUND was established in 2008 by Dr. and Mrs. Ernest G. Kelly to provide financial support for students at the School of Medicine.

THE EARL A. AND FRANK B. KIMZEY SCHOLARSHIP was established in 1989 and the bequest realized in 2012 through the estate of Mrs. Frances K. Riley to provide financial support based on merit for deserving students at the School of Medicine.

THE IKE J. KUHN SCHOLARSHIP was established in 1946 through the bequest of Ike J. Kuhn to provide financial support for worthy students at the School of Medicine.

THE JOHN M. LEONARD M.D. SCHOLARSHIP was established in 2013 by the Baker Eye Institute to provide financial support based on need or merit for deserving students at the School of Medicine. Baker Eye Institute established the fund in honor of Dr. David L. Baker’s mentor, John M. Leonard, M.D. 1967.

THE ANN LIGHT SCHOLARSHIP FUND was established in 1983 by Mrs. Ann Light to provide financial support for students at the School of Medicine.

THE DORS M. AND FRED W. LOVE HONOR SCHOLARSHIP was established in 2015 through the estates of Doris M. Love and Fred W. Love, M.D. 1945, to provide financial support based on merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE CHARLES T. LOWE SCHOLARSHIP FUND was established in 2003 through the bequest of Charles T. Lowe, B.A. 1932, M.D. 1936, H.O. 1936, to provide financial support for students at the School of Medicine.

THE LUX SCHOLARSHIP FOR ORAL SURGERY was established in 1990 through the bequest of Konrad Lux, M.D. 1925, to provide financial support for worthy and qualified students in the graduate program of Oral Surgery at the School of Medicine.

THE LUX SCHOLARSHIP IN MEDICINE was established in 2009 through the bequest of Konrad Lux, M.D. 1925, to provide scholarship support to students at the Vanderbilt University School of Medicine.

THE THOMAS L. MADDOX M.D. FUND was established in 1944 through the realized bequest of Mrs. Sallie A. C. Watkins to provide financial support for male students at the School of Medicine.
THE JACK MARTIN SCHOLARSHIP FUND was established in 1989 by Murphy Baxter to provide financial support based on need for students at the School of Medicine.

THE MARGARET LOONEY McALLEN SCHOLARSHIP was established in 2005 by Dr. C. Ashley McAllen, M.D. 1987, to provide financial support based on need for deserving students at the School of Medicine.

THE ROBERT L. AND BILLYE MCCRACKEN SCHOLARSHIP FUND was established in 2003 by Dr. Robert L. McCracken, M.D. 1939, to provide financial support for students at the School of Medicine.

THE PATRICIA AND EDWARD J. MCGAVOCK SCHOLARSHIP was established in 2000 through the bequest of Mrs. Patricia Warren McGavock to provide financial support for students at the School of Medicine.

THE CHARLES AND EDITH MCGILL SCHOLARSHIP FUND was established in 2000 through the trust of Dr. Charles M. McGill, M.D. 1935, and Mrs. Edith McGill to provide financial support for students at the School of Medicine.

THE BARTON MCSWAIN ENDOWED SCHOLARSHIP was established in 1994 by multiple donors to provide need-based scholarships to students at the School of Medicine.

THE BESS AND TOWNSEND A. McVEIGH SCHOLARSHIP FUND was established in 1977 by Miss Grace McVeigh, B.A. 1925, to provide full-tuition, four-year financial support for needy and worthy students at the School of Medicine.

THE MEDICAL STUDENT SCHOLARSHIPS GIFT FUND was established by various donors to provide financial support for students at the School of Medicine.

THE H. HOUSTON MERRITT SCHOLARSHIP FUND was established in 1990 through the estate of Mabel Carmichael Merritt and Dr. H. Houston Merritt, B.A. 1922, to provide financial support for worthy students at the School of Medicine.

THE JAMES PRESTON MILLER SCHOLARSHIP FUND was established in 1960 by the bequest of Mr. James P. Miller to provide financial support for deserving students to obtain medical training at the School of Medicine at Vanderbilt University.

THE ANN MINOT ENDOWED SCHOLARSHIP was established in 1994 by multiple donors to provide financial support based on need for students at the School of Medicine.

THE RICHARD M. SCOTT SCHOLARSHIP FUND was established in 1988 by multiple donors, including School of Medicine students, to provide financial support based on need for deserving students at the School of Medicine.

THE ROMM FAMILY SCHOLARSHIP was established in 2016 by Richard E. Romm, H.O. 1979, to provide financial support based on need for deserving students at the School of Medicine.

THE DR. LESLIE M. AND EVELYN C. SMITH MEDICAL SCHOLARSHIP FUND was established in 1998 by Evelyn Clark Smith, widow of Dr. Leslie Smith, B.A. 1935, and Dr. Leslie Smith, B.A. 1934, to provide financial support based on need for deserving students at the School of Medicine.

THE DAVID E. AND BARBARA L. ROGERS ENDOWED SCHOLARSHIP was established in 1999 through a bequest from Grace McVeigh, B.A. 1925, to provide four-year financial support based on need for deserving students at the School of Medicine.

THE GEORGE E. ROULHAC MEMORIAL SCHOLARSHIP FUND was established in 1995 through a bequest from Dr. George E. Roulhac, B.A. 1936, to provide financial support based on need for deserving students at the School of Medicine.

THE CANBY ROBINSON SCHOLARSHIPS were established in 1980 by members of the Riley family including Dr. Harris D. Riley Jr., B.A. 1945, M.D. 1948, Frank Riley, B.A. 1949, Richard F. Riley, B.A. 1946, M.D. 1948, and William G. Riley, B.A. 1943, M.D. 1946, to provide financial support based on need for deserving students at the School of Medicine.

THE DAVID E. AND BARBARA L. ROGERS ENDOWED SCHOLARSHIP was established in 2003 by Mrs. Barbara Rogers to provide financial support based on need for deserving students at the School of Medicine.

THE HELEN W. AND LOUIS ROSENFELD ENDOWMENT SCHOLARSHIP FUND was established in 1984 by Helen Rosenfeld, B.A. 1934 and Louis Rosenfeld, B.A. 1933, M.D. 1936, to provide financial support based on need for students at the School of Medicine.

THE JOHN N. SHELL ENDOWMENT FUND was established in 1980 by John N. Shell, M.D. 1928, and Marion S. Shell to provide financial support for worthy medical students at the School of Medicine.

THE ELIZABETH CRAIG PROCTOR SCHOLARSHIP was established in 2002 by Elizabeth Proctor to provide financial support for worthy medical students at the School of Medicine.

THE DARLINE AND ROBERT RASKIND SCHOLARSHIP was established in 2012 through the bequest of Doris Darline Raskind and Robert Raskind, M.D. 1938, to provide financial support for deserving students at the School of Medicine.

THE JONATHAN O. PARTAIN M.D. AND VIRGINIA G. PARTAIN SCHOLARSHIP was established in 2005 by Martha H. Rush to provide financial support based on need for deserving students at the School of Medicine.

THE CANBY ROBINSON SCHOLARSHIPS were established in 1980 by members of the Riley family including Dr. Harris D. Riley Jr., B.A. 1945, M.D. 1948, Frank Riley, B.A. 1949, Richard F. Riley, B.A. 1946, M.D. 1948, and William G. Riley, B.A. 1943, M.D. 1946, to provide financial support based on need for deserving students at the School of Medicine.

THE CANBY ROBINSON SCHOLARSHIPS were established in 1980 by members of the Riley family including Dr. Harris D. Riley Jr., B.A. 1945, M.D. 1948, Frank Riley, B.A. 1949, Richard F. Riley, B.A. 1946, M.D. 1948, and William G. Riley, B.A. 1943, M.D. 1946, to provide financial support based on need for deserving students at the School of Medicine.

THE ETHEL AND LOUIS SHIVITZ SCHOLARSHIP was established in 2012 through the bequest of Doris Darline Raskind and Robert Raskind, M.D. 1938, to provide financial support for deserving students at the School of Medicine.

THE JOHN SECONDI SCHOLARSHIP FUND was established in 1987 by multiple donors to provide financial support based on need for deserving students at the School of Medicine.

THE H. HOUSTON MERRITT SCHOLARSHIP FUND was established in 1990 through the estate of Mabel Carmichael Merritt and Dr. H. Houston Merritt, B.A. 1922, to provide financial support for worthy students at the School of Medicine.

THE JAMES PRESTON MILLER SCHOLARSHIP FUND was established in 1960 by the bequest of Mr. James P. Miller to provide financial support for deserving students to obtain medical training at the School of Medicine at Vanderbilt University.

THE JANETTE L. SCOTT SCHOLARSHIP was established in 2000 through the bequest of Georgianna C. Rhodes to support one or more fellowships at the School of Medicine.

THE DARLINE AND ROBERT RASKIND SCHOLARSHIP was established in 2012 through the bequest of Doris Darline Raskind and Robert Raskind, M.D. 1938, to provide financial support for deserving students at the School of Medicine.
THE DR. FRANK C. AND CONNIE EWELL SPENCER MEDICAL SCHOLARSHIP was established in 1997 by Frank Cole Spencer, M.D. 1947, and his wife, Connie Ewell Spencer, B.A. 1946, to provide financial support based on need for worthy students at the School of Medicine.

THE K. DOROTHEA AND JOSEPH G. SUTTON SCHOLARSHIP IN MEDICINE was established in 1995 through the bequest of Joseph Guy Sutton and Dorothea C. Sutton to provide financial support based on need for deserving students at the School of Medicine.

THE HARLAN HOWARD TAYLOR SURGICAL SCHOLARSHIP FUND was established in 1987 by multiple donors including Dr. Harlan Howard Taylor, B.A. 1923, M.D. 1926, and his wife, Mrs. Elizabeth Parks Taylor, to provide financial support based on need for fourth-year students at the School of Medicine who are going into surgical fields.

THE BETTYE SUE AND JOHN C. THORNTON JR. SCHOLARSHIP was established in 2013 by John C. Thornton, Jr., B.A. 1937, M.D. 1940, to provide financial support for deserving students at the School of Medicine.

THE VANDERBILT MEDICAL SCHOOL SCHOLARSHIP FUND was established in 2001 by multiple donors to provide financial support based on need for deserving students at the School of Medicine.

THE ANDREW WM. WALKER M.D. SCHOLARSHIP was established in 2010 by Andrew William Walker, M.D. 1960, to provide financial support for deserving students at the School of Medicine.

THE IRENE GEORGIA BEDFORD WATERS SCHOLARSHIP was established in 2003 by Dr. William Bedford Waters, M.D. 1974, to provide financial support based on need for deserving students at the School of Medicine.

THE FRED C. WATSON MEMORIAL SCHOLARSHIP was established through the bequest of Malvina A. Watson to provide financial support based on need for deserving students at Vanderbilt University, including students at the School of Medicine.

THE JOE AND HOWARD WERTHAN FOUNDATION SCHOLARSHIP FUND was established in 1958 by the Joe and Howard Wërthan Foundation to provide financial support based on need for students at the School of Medicine.

THE JONI P. WERTHAN SCHOLARSHIP was established in 2010 by Ms. Joni P. Wërthan to provide financial support for one or more outstanding student(s) at the School of Medicine.

THE JAMES WHITAKER WEST SCHOLARSHIP was established in 2001 by Mrs. Ruth B. West, A. 1949, and Dr. John Thomas West, B.A. 1949, M.D. 1951, to provide financial support based on need or merit for deserving students at the School of Medicine.

THE DAVID HITT WILLIAMS M.D. MEMORIAL SCHOLARSHIP FUND was established in 1998 through a bequest gift from Ms. Eugenia Williams to provide financial support for worthy and deserving students at the School of Medicine.

THE WILLIAMS SCHOLARSHIP was established in 2003 by Mr. and Mrs. Riley Wills II through The Wills Foundation to provide financial support based on need for deserving students at the School of Medicine.

THE ROBERT JEWELL WILSON II AND SHARMA MAURISSA JEWELL WILSON SCHOLARSHIP was established in 2007 by Mr. Robert J. Wilson to provide need-based scholarship support to deserving students at the Vanderbilt University School of Medicine.

THE DR. GUY T. GILLESPIE JR. AND TAY GILLESPIE SCHOLARSHIP was established in 2007 by Dr. Guy T. Gillespie, Jr., B.A. 1952, and Sarah A. ‘Tay’ Gillespie of Pinola, Mississippi to provide need-based scholarship support for deserving medical students enrolled in the Vanderbilt University School of Medicine.

THE CHARLES E. AND MILDRED WORK SCHOLARSHIP was established in 2001 by the bequest of Charles E. Work, M.D. 1935, to provide financial support for deserving students at the School of Medicine.

THE DR. STEPHEN S. KUTNER SCHOLARSHIP was established in 2016 by Project Vision, Inc., on behalf of Jeanney Kuttner and Stephen S. Kutner, M.D. 1965, to provide financial support based on need or merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE WILLIAM D. JOHNSTON M.D. MEMORIAL SCHOLARSHIP was established in 2016 by Linda H. Welborn, B.S. 1964, M.A. 1968, and William R. Welborn Jr., B.A. 1964, M.D. 1967, HO/FE 1967, to provide financial support based on need for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE JUDSON G. RANDOLPH SCHOLARSHIP was established in 2016 by Susan E. Poirier and Tommy J. Poirier, M.D. 1967, to provide financial support based on need for a student at the School of Medicine.

THE KEITH NOLOP M.D. SCHOLARSHIP was established in 2016 by the Keith Nolop Irrevocable Trust to provide financial support based on need or merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE BARBARA R. AND GLENN H. MERZ SCHOLARSHIP was established in 2010 by Barbara R. and Glenn H. Balser, M.D., Ph.D. 1990, to provide financial support for deserving students at the School of Medicine.

THE ESSERMAN FAMILY MEDICAL SCHOLARSHIP was established in 2013 by Ivette C. and Charles H. Esserman to provide financial support based on need or merit for deserving M.D. or M.D./Ph.D. students at the School of Medicine.

THE GOODMAN FAMILY MEDICAL EDUCATION FUND was established in 2010 by the Mt. Brilliant Family Foundation to support educational scholarships to facilitate the training of leaders and scholars in medicine at the School of Medicine.

THE MARY AND WILLIAM O. INMAN, JR. SCHOLARSHIP FUND was established in 1985 by Grace McVeigh, B.A. 1925, to provide financial support for M.D./Ph.D. students at the School of Medicine.

THE MEADE HAVEN CHARITABLE TRUST M.D./PH.D. SCHOLARSHIP was established in 1977 by Jesse E. Wills to provide financial support for M.D./Ph.D. students at the School of Medicine who have made a serious career commitment to obtain advanced experience and training in research in the biomedical sciences.

THE ANN MELLY SUMMER SCHOLARSHIP IN ONCOLOGY was established in 1987 through the estate of Marian Ann Melly, Ph.D. 1969, to provide financial support for deserving medical students at the School of Medicine who are conducting research in the field of oncology.

THE BARBARA R. AND GLENN H. MERZ SCHOLARSHIP was established in 2010 by Barbara R. and Glenn H. Merz to provide financial support for deserving M.D./Ph.D. students at the School of Medicine.

THE HERBERT M. SHAYNE ENDOWMENT was established in 2003 by the Shayne Foundation to provide financial support for two M.D./Ph.D. students at the School of Medicine.

THE TRANSLATIONAL BIOCHEMISTRY ENDOWED RESEARCH AND SCHOLARSHIP FUND was established in 2010 by Janet and J. William Freytag to support research and scholarships at the School of Medicine. The fund will support a faculty member or student at the School of Medicine who is conducting research in the area of translational biochemistry, with a primary focus in the area of matrix biology.

THE THOMAS HUGGINS WINN SCHOLARSHIP FUND was established in 1990 from the estate of Fanny Edith Winn to provide financial support for a student at the School of Medicine.
Financial Information for School of Medicine Master’s and Other Doctoral Degrees

Information for the 2018/2019 academic year is as follows.

Tuition and fees are set annually by the Board of Trust and are subject to review and change without further notice.

2018/2019

The following costs are included with tuition:
- Professional liability insurance
- Student long-term disability insurance
- Student health service
- Verifications

The following fees are assessed individually and separate from tuition:
- Application fee (to accompany secondary application) $ 85
- Student activities and recreation fee 561
- Student health insurance 3,162
- Transcript fee (one time only) 100

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Tuition, 1st year</th>
<th>Tuition, 2nd year</th>
<th>Special, Non-Degree Seeking (per credit hour)</th>
<th>Total Estimated Cost of Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doctor of Audiology and Master of Education of the Deaf and Master of Science (Speech-Language Pathology)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 1st, 2nd, 3rd years</td>
<td>$39,609</td>
<td></td>
<td>1,551</td>
<td>$74,562</td>
</tr>
<tr>
<td>Tuition, 4th year</td>
<td>7,841</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special, Non-Degree Seeking (per credit hour)</td>
<td>1,551</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total estimated cost of attendance for a first year student is $74,562.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Master of Science in Medical Physics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 1st year</td>
<td>$38,140</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 2nd year</td>
<td>25,433</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special, Non-Degree Seeking (per credit hour)</td>
<td>1,588</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total estimated cost of attendance for a first year student is $73,093.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Doctor of Medical Physics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 1st, 2nd years</td>
<td>$39,721</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 3rd, 4th years</td>
<td>33,377</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special, Non-Degree Seeking (per credit hour)</td>
<td>1,588</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total estimated cost of attendance for a first year student is $74,674.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Master of Public Health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 1st year</td>
<td>$36,601</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 2nd year</td>
<td>18,301</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special, Non-Degree Seeking (per credit hour)</td>
<td>1,521</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total estimated cost of attendance for a first year student is $70,993.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Master of Science in Clinical Investigation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 1st year</td>
<td>$37,312</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 2nd year</td>
<td>18,656</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special, Non-Degree Seeking (per credit hour)</td>
<td>1,551</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total estimated cost of attendance for a first year student is $71,704.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Master of Science in Applied Clinical Informatics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 1st year</td>
<td>$43,763</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition, 2nd year</td>
<td>14,588</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special, Non-Degree Seeking (per credit hour)</td>
<td>1,521</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total estimated cost of attendance for a first year student is $78,716.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Master of Laboratory Investigation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition (12 hours at $1,551/hr.)</td>
<td>$18,612</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The total estimated cost of attendance for a first year student is $53,004.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Payment of Tuition and Fees

Fall semester tuition, fees, and other university charges are due and payable by 31 August. Spring semester tuition, fees, and other university charges are due and payable by 3 January. Summer charges are due and payable by 30 June.

Additional information can be found at finance.vanderbilt.edu/stuaccts.

Refund of Tuition

Students who withdraw officially or who are dismissed from the university for any reason after the beginning of a term may be entitled to a partial refund in accordance with the schedule shown below. No refund will be made after the tenth week in any semester.

<table>
<thead>
<tr>
<th>Withdrawal prior to the end of</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st full week</td>
<td>100%</td>
</tr>
<tr>
<td>2nd full week</td>
<td>90%</td>
</tr>
<tr>
<td>3rd full week</td>
<td>85%</td>
</tr>
<tr>
<td>4th full week</td>
<td>80%</td>
</tr>
<tr>
<td>5th full week</td>
<td>75%</td>
</tr>
<tr>
<td>6th full week</td>
<td>65%</td>
</tr>
<tr>
<td>7th full week</td>
<td>60%</td>
</tr>
<tr>
<td>8th full week</td>
<td>50%</td>
</tr>
<tr>
<td>9th full week</td>
<td>45%</td>
</tr>
<tr>
<td>10th full week</td>
<td>40%</td>
</tr>
</tbody>
</table>

No refund after the 10th full week.

Late Payment of Fees

Charges not paid by 31 August will be automatically deferred, and the student’s account will be assessed a monthly late payment fee at the following rate: $1.50 on each $100 that remains unpaid after 31 August (5% minimum). An additional monthly late payment fee will be assessed unless payment is received in full or on or before the end of each month, and late payment fees will continue for each month thereafter based on the outstanding balance unpaid as of the end of each month. All amounts deferred are due not later than 1 November for fall semester and 1 April for spring semester. Graduating students are not allowed to defer charges that are billed in advance for the final semester.

Financial Clearance

Students may not be allowed to register for any semester if they have outstanding unpaid balances for any previous semester. No transcript, official or unofficial, will be issued for a student who has an outstanding balance until the account has been paid. Diplomas of graduating students may be withheld until all bills are paid.
International students must provide documentation of having funds sufficient to meet all tuition, mandatory fees, and living expenses for the anticipated period of enrollment before a visa will be issued. Information will be provided by the University Office of International Student and Scholar Services.

**Activities and Recreation Fees**
The required student activities and recreation fees entitle students to use the facilities of Sarratt Student Center and the Student Recreation Center. The fees also cover admission to certain social and cultural events and subscriptions to certain campus publications. Specific information on these fees is published annually in the Vanderbilt University *Student Handbook*. By payment of an additional fee, students and their spouses may use their identification cards for admission to athletic events.

**Professional Liability Insurance**
Students will be automatically covered with professional liability insurance, required of all enrolled medical students, at the time of registration. Details of the policy are available at the university student insurance office, and students are encouraged to familiarize themselves with these details and with their responsibilities in this regard. Students are covered whether they are at the Vanderbilt-affiliated hospitals (Vanderbilt University Medical Center, Nashville Veterans Administration Hospital, or Saint Thomas Health-affiliated hospitals) or elsewhere as a “visiting student,” providing that (1) the clerkship or other educational experience has prior approval from the School of Medicine as coursework for credit, and (2) the activities within this experience are consonant with the student’s level of training and experience and are performed under the supervision of appropriate faculty and/or staff.

**Disability Insurance**
Students will be automatically covered with long-term disability insurance, required of all enrolled medical students, at the time of registration. Details of the policy can be found at https://medschool.vanderbilt.edu/financial-services/insurance.

**Student Health Insurance**
All degree-seeking students registered for 4 or more hours at Vanderbilt are required to have adequate hospitalization insurance coverage. The university offers a sickness and accident insurance plan that is designed to provide hospital, surgical, and major medical benefits. A brochure explaining the limits, exclusions, and benefits of insurance coverage is available at gallaghestudent.com. Additional information is also available at finance.vanderbilt.edu/stuaccts/g_health.html.

**Student Health Service Costs**
Student health service costs include required immunizations and health screening tests.

**Verification Costs**
Verification costs cover all required verification processes including criminal background checks and drug screens.

**Transcript Fee**
All new students entering Vanderbilt for the first time are charged a one-time transcript fee for official university transcripts.

**Financial Assistance**
Approved educational expenses are met with funds from a combination of sources. Government loans that furnish significant loans to students are the Federal Direct Unsubsidized Loan and Federal Direct Graduate PLUS loans. Private loans are also available to international students. Additional information and applications for financial aid are online at medschool.vanderbilt.edu/financial-services/. Applicants desiring more specific information about financial aid resources should contact the Medical School Office of Student Financial Services.
Courses of Study

The School of Medicine offers the following degree programs: Doctor of Medicine, Doctor of Audiology, Doctor of Medical Physics, Master of Education of the Deaf, Master of Genetic Counseling, Master of Science (Speech-Language Pathology), Master of Science in Medical Physics, Master of Science in Clinical Investigation, Master of Laboratory Investigation, Master of Public Health, and Master of Science in Applied Clinical Informatics. Courses in the School of Medicine are offered in both semester and year-long formats. Courses leading to the M.D. do not carry credit hours; other programs use the traditional credit hour designation.

The university reserves the right to change the arrangement or content of courses, to change texts and other materials used, or to cancel any course on the basis of insufficient enrollment or for any other reason.

DOCTOR OF MEDICINE

Courses leading to the Doctor of Medicine*

*Glossary of Terms available at http://vanderbi.lt/mdcourseglossary

Anesthesiology

ANES 5310. Basic Clinical Anesthesiology. Students will become an integral part of an anesthesia care team model (attending anesthesiologist and resident) at VUMC. Working side-by-side with this care team, students will learn and actively participate in the perioperative management of adult patients presenting for surgical procedures and diagnostic or therapeutic interventions requiring anesthetic care and management. Students will participate in preoperative assessment, risk stratification, development and execution of anesthetic plan (including induction of anesthesia, airway management, maintenance of anesthesia, and emergence), and immediate postoperative care of patients. This rotation will provide a hands-on, continually monitored and mentored experience. At the conclusion of this two-week elective rotation, students will be able to take and perform a focused anesthesia history and physical, evaluate airway anatomy for ease or difficulty of airway management, and demonstrate valuable skills of mask/bag ventilation, intubation, and LMA placement. Additionally, through designated lectures, assigned textbook, selected journal readings, and hands-on clinical experiences, students will be acquainted with the pharmacology and physiology of anesthetic induction and maintenance agents, neuromuscular blocking drugs, vasoactive substances, local anesthetics, and opioid and non-opioid analgesics. Students will assess and interpret physiologic data from both non-invasive and invasive monitors and explain implementation of interventions to correct physiologic and hemodynamic perturbations.

ANES 5315. Perioperative Neurosciences: The Brains of the Operation. The overall goal of this elective is to have students apply their knowledge of anatomy, physiology, and pharmacology to the presentation and management of common neurological disorders. The students will have dedicated orientation and didactic sessions to review their experience and knowledge. Each will have a set of self-study exercises which will be reviewed with their dedicated mentor. Students will participate as active team members in several settings including the neuro care unit (NCU) and in the operating rooms with the neuro anesthesia and surgical teams. At the end of the two-week rotation, the students will demonstrate a focused history and physical exam of a neurological patient. They will be able to state the pathophysiology of the most common presenting neurological conditions such as raised intracranial pressure, seizures, or strokes including common methods of diagnosis. They will be able to present the patient and, based on their knowledge of CNS physiology, formulate a basic plan for medical or surgical management. In addition, students will understand how the care of these patients (nursing, monitoring, and pharmacology) differs from other medical conditions and the role of each specialty in the care of these patients.

ANES 5610. ACE: Perioperative Medicine and Surgical Home. This course is designed to emphasize the concepts of coordinated perioperative medicine and enhanced recovery after surgery (ERAS). Evidence-based guidelines, optimization/standardization of perioperative care, and multimodal strategies to decrease postoperative morbidities are key components of ERAS. The student will function as integral part of the Perioperative Anesthesia Consult Service and learn fundamental aspects of anesthetic care that maximize perioperative pain control and reduce morbidity and health care costs related to cardiac, pulmonary, renal, endocrine, PONV complications or surgical site infections. The student will have an opportunity to be involved in the preoperative, intraoperative, and postoperative management of surgical patients on ERAS pathways.

ANES 5611. ACE: Advanced Clinical Anesthesiology. This ACE will define the role of Anesthesiology as a Perioperative Medicine Specialty in which students will gain broad understanding of the perioperative management of patients across all age groups undergoing surgical procedures. Course content will emphasize the following principles: preoperative assessment, development and execution of an anesthetic plan (including induction of anesthesia, airway management, maintenance of anesthesia, and emergence), and management of acute pain. Students will become an integral part of an anesthesia care team model (attending anesthesiologist and resident). Working side-by-side with this care team, students will learn and actively participate in the anesthetic management of patients presenting for surgical procedures and diagnostic or therapeutic interventions.

ANES 5701. AI: Anesthesiology for OMFS. To be determined.

ANES 6100. Special Clinical Study-Vanderbilt. Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

ANES 7100. AWAY ACE: Anesthesiology. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

ANES 7150. Special Research Study-Non-VU. Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

Dermatology

DERM 5790. ACE: Clinical Dermatology. This clinical experience will be in the outpatient clinic setting and the inpatient consultation setting with direct faculty interaction. The location of clinic assignments will be in the VU Dermatology Clinic at Vanderbilt One Hundred Oaks and the Dermatology Clinic at the Nashville VA Hospital. There will be participation in weekly conferences specifically for the rotators on the clerkship. The didactic lectures during the month will focus on the identification, treatment, and management of common dermatologic diseases. The clinical experience will reinforce the lectures plus give insight into the role of the dermatologist as a consultant for less common and difficult to treat conditions.

DERM 6100. Special Clinical Study: Dermatology, VU. Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

DERM 7100. AWAY ACE: Dermatology. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

Emergency Medicine

EM 5315. Emergency Medicine Elective. This elective will provide a two-week snapshot into the approach to any event or circumstance that threatens loss of life, injury to person or property, or human suffering.
Students will be introduced to critical situations in the actual emergency department while learning the important skills required for patient stabiliza-
tion and assessment. At the conclusion of the elective, students will under-
stand and gain comfort in their future roles as physicians in any emergency
situation in or out of the hospital setting. They will understand emergency
care while extrapolating their current beliefs regarding emergency care to
situations in the hospital setting and in the surrounding community. Stu-
dents will apply problem-based strategies and teamwork to patient care,
using the introductory principles in emergency medicine. They will practice
an evidence-based approach and engage in teamwork to enhance their knowledge
and skills in treating victims of cardiopulmonary and traumatic emergencies.

EM 5325. Bedside Ultrasoundography in the Emergency Medicine
Department. Students will be introduced to point-of-care ultrasonogra-
phy with specific emphasis on its use in the acute care setting. Students
will learn about sonography both through web-based resources and
videos as well as during weekly didactic sessions. In addition, students
will spend several shifts in the Emergency Department each week both
observing and performing point-of-care sonography under the guidance of
the Director and Assistant Director of Emergency Ultrasound, Emergency
Ultrasound Fellows, and Emergency Medicine residents. At the conclusion
of the two-week elective rotation, students will be able to describe the
appropriate use and application of point-of-care sonography in multiple
clinical scenarios. They will be able to recognize normal and pathologic
ultrasound images of several core applications. They will acquire the nec-
essary technical skills to operate the ultrasound machine and to obtain
images for several important studies including FAST (Focused Assess-
ment with Sonography in Trauma), cardiac, abdominal aorta, renal, and
soft tissue.

EM 5330. Prehospital Emergency Medicine: Overview of EMS, Wil-
derness, Event, and Mass Casualty Emergency Med. In this introduc-
tion to prehospital emergency medicine, elective students will experience
the full range of EMS—from systems management in the Vanderbilt Com-
munications Center to individual patient care in ambulance ride alongs.
Through riding with Nashville Fire paramedics and physician directors,
oberving medical control calls, participating in quality improvement meet-
ings, and reviewing prehospital medicine landmark literature, students will
develop an understanding of the physician role in prehospital medical sys-
tems. Didactics and hands-on simulation will also cover disaster, wilder-
ness and event medicine. This course is designed for students interested
in emergency medicine and its subspecialties.

Emergencies happen in all specialties and even in life. The 4 week Emer-
gency Medicine ACE will introduce the student to emergency medicine
and the initial management strategies for common life threatening emerg-
cencies. Students will develop an approach to common undifferentiated
patient complaints and a practical skill set in: acid-base emergencies,
basic airway management, electrocardiogram interpretation, and electro-
lyte emergencies. Students will also complete Basic Life Support (BLS)
and Advanced Cardiac Life Support (ACLS) training. During the week,
there are daily didactic sessions as well as procedure labs and high fidelity
simulations. Clinical shifts are spread across a variety of practice settings
(adult and pediatrics) and offer a broad exposure. Students work closely
with emergency medicine faculty and residents to identify sick patients
and develop differential diagnoses and management plans. Students also
have the opportunity to participate in procedures and trauma resuscita-
tions. Fulfills the acute care course requirement.

EM 6100. Special Clinical Study-Vanderbilt. Each student arranged an
independent study with a mentor and completes a period of clinical work.
Approval required.

EM 7100. AWAY ACE: Emergency Medicine. Each student arranged an
independent study with a mentor and completes a period of clinical work
away from Vanderbilt. Approval required.

EM 7150. Special Research Study-Non-VU. Each student arranged an
independent study with a mentor and completes a period of research
work away Vanderbilt. Approval required.

**Interdisciplinary Studies**

**IDIS 5001. CASE—Clinical Application of Scientific Evidence.** The
research curriculum is a four-year thread. Students will be introduced to
a career as a physician-researcher and receive training and hands-on expe-
rience in several critical areas of importance to success in research. This
will be accomplished through a series of didactic lectures focused on intro-
duction to important skills and traits of physician-researchers, shadowing
and interviewing physician-researchers and processing the information to
tell a story through a film documentary and related curriculum. First year.

**IDIS 5002. Discovery.** Students will engage in activities which further
develop understanding of research process while supporting explora-
tion of research opportunities that may be pursued during the Immersion
Phase. The course begins with an overview of general research areas in
which students can participate. Additional course meetings include topics
related to mentoring, ethics and professionalism, regulatory training, and
scientific communication.

**IDIS 5003. Innovation Activism.** This course is designed for MD stu-
dents in the MIDP program, and will blend the engineering strategies of
house of quality with voice of the customer to enhance the active obser-
vation and goal setting of innovation strategy. When accepted into teams of
clinical clerkships, the students will identify opportunities for innovation in
the patient, provider and/or system they observe in the clinic. Students will
complete preliminary steps of the design process for projects that will be
further developed in the third year MIDP Innovation Design Experience
and Application Lab.

**IDIS 5015. Interprofessional Continuity Clinic 1: Vanderbilt Pro-
gram in Interprofessional Learning (VPIL).** The Vanderbilt Program in
Interprofessional Learning (VPIL) is a longitudinal continuity clinic experi-
ce where students work and learn together as members of an inter-
professional team. This is the first year of a two-year experience. Medical
students accepted into the program are assigned to teams of health pro-
fessions students earning degrees in advanced practice nursing, phar-
macy and social work. The teams work alongside their assigned clinical
preceptors in order to deeply understand the many factors—biological,
social, psychological, economic and cultural—that impact patient health
and wellbeing, as well as system factors that impact how our health care
teams and clinics function on a daily basis. The program launches with a
week-long summer immersion. Throughout the academic year, student
teams work and learn together in clinics, seminars and simulated learning
activities. Program goals include: cultivate respectful professionals, nur-
ture self-directed workplace learners, prepare leaders who contribute to
a collaborative-practice-ready workforce, integrate the patient care expe-
rience with health professions knowledge, and improve the health care
delivery system by integrating systems knowledge with patient care. Par-
ticipation in VPIL allows for medical students to waive credit in specified
areas of Foundations of Health Care Delivery (FHD). Specific graduation
requirements can be found at https://medschool.vanderbilt.edu/vpil/

**IDIS 5016. Interprofessional Continuity Clinic 2: Vanderbilt Pro-
gram in Interprofessional Learning (VPIL).** The Vanderbilt Program in
Interprofessional Learning (VPIL) is a longitudinal continuity clinic experi-
ce where students work and learn together as members of an interpro-
fessional team. This is the second year of a two-year experience. Medical
students accepted into the program are assigned to teams of health pro-
fessions students earning degrees in advanced practice nursing, phar-
macy and social work. The teams work alongside their assigned clinical
preceptors in order to deeply understand the many factors—biological,
social, psychological, economic and cultural—that impact patient health
and wellbeing, as well as system factors that impact how our health care
teams and clinics function on a daily basis. Throughout the academic year,
student teams work and learn together in clinics, seminars and implement
a quality improvement project. They will present their project as part of
a Capstone event that completes the program. Program goals include:
cultivate respectful professionals, nurture self-directed workplace learners,
preserve leaders who contribute to a collaborative-practice-ready work-
force, integrate the patient care experience with health professions knowl-
edge, and improve the health care delivery system by integrating systems
knowledge with patient care. Participation in VPIL allows for medical stu-
dents to waive credit in specified areas of Foundations of Health Care
Clinical Experience is a longitudinal clinical experience where individual students are integrated into a clinic to learn about the clinical care team, clinic setting, and develop skills to care for individual patients while learning about the larger care-delivery system. Course activities including clinical experiences and seminars will address the following goals: 1. Prepare professionals with systems-level skills necessary to provide care that is safe, effective, patient-centered, timely, efficient, and equitable. 2. Integrate health systems sciences with clinical care. 3. Cultivate respectful professionals.

**IDIS 5055. Foundations of the Profession.** The goal of this course is to provide students with an understanding of the historical and social context of the practice of medicine. Through assigned readings, lectures, small group discussions and simulations, students will gain an appreciation for the core values and ethical principles that guide the profession’s relationship with society and the physician’s relationships with patients. They will also explore some of the contemporary challenges facing physicians today, including the need to improve health care disparities, quality, and safety. First year.

**IDIS 5058. Endocrine, Digestion, and Reproduction.** This course is designed to familiarize students with the normal anatomic, molecular, biochemical, and physiologic features of the endocrine, digestive and reproductive systems. Course content will provide a framework for an understanding of the pathology and pathophysiology of diseases that affect these systems as well as their diagnosis (laboratory and imaging) and therapy (pharmacologic and nonpharmacologic). The role of nutrition in normal homeostasis as well as disease will be included. Pregnancy from implantation to delivery as well as its complications will also be learned. A multidisciplinary approach will allow integration of pathobiology, clinical manifestations, and therapy in a comprehensive manner. The course will utilize a variety of teaching modalities that include case-based learning, team-based learning, patient interviews, lectures, laboratory sessions focused on the gross and microscopic anatomy and pathology, and technology-based modalities and simulations. Clinical context will be emphasized in order to prepare students for the next phase of their education in the clinical setting. The course will be integrated with all other learning activities in the Foundations of Medical Knowledge Phase. Required. First year.

**IDIS 5100. ACE: Primary Care Medicine, VU.** All immersion phase students will have a required four-week unit in an ambulatory primary care setting, and this course fulfills that requirement. Students will choose an experience in outpatient pediatrics, internal medicine, family medicine, or internal medicine/pediatrics. Practice sites include ambulatory clinics at Vanderbilt or within the Nashville-area community. The clinic experience is supplemented by a home visit to follow-up on a patient seen during the ambulatory clinic experience. Assistance with placement is provided.

**IDIS 5150. AWAY ACE: Primary Care Medicine.** All immersion phase students will have a required four-week unit in an ambulatory primary care setting, and this course fulfills that requirement. Students will choose an experience in outpatient pediatrics, internal medicine, family medicine, or internal medicine/pediatrics. Practice sites include ambulatory medicine or pediatric clinics. Students may arrange a primary care experience outside of Nashville, subject to the approval of the course directors. The clinic experience is supplemented by a home visit to follow-up on a patient seen during the ambulatory clinic experience. Assistance with placement is not provided, and students are also responsible for insuring that proper affiliation agreements are in place for this rotation.
IDIS 5200. MSTP Seminar Series. This elective is open to students in the Medical Scientist Training Program only.

IDIS 5201. Foundations of Biomedical Research I. The major goals of this course for MSTP students in their first year of medical school are to help them to gain familiarity in reading primary research literature, including utilization of statistical analyses, and to aid the students in selection of a thesis mentor and in understanding of appropriate expectations for both mentors and mentees. These goals will be accomplished in a casual setting through interactions with potential MSTP-eligible faculty and lab members, consultation with faculty advisors, and primary literature discussions. Students will be assessed based upon course participation. Open to students in the Medical Scientist Training Program only. First year.

IDIS 5202. Foundations of Medical Research II. The purpose of this course is to prepare MSTP students for the biomedical research phase of training. The course objective is to develop skills for physician-scientist trainees in critical evaluation of the research literature and formulating high-impact research questions. For second-year students the course will be tailored to the individual interests of the students and their research mentors, with particular emphasis on examining scientific papers specific to the students’ field of research. Open to students in the Medical Scientist Training Program only. Second year.

IDIS 5215. Foundations of Health Care Delivery 2: Clinical Systems of Care. Foundations of Health Care Delivery 2: Clinical Systems of Care is a course designed to introduce students to the larger health care systems. Students will engage in didactics and experiential learning to develop a deeper understanding of the systems involved in practicing within a mesosystem and macrosystem. Students will learn about social determinants of health and community advocacy, experience a variety of settings of care, learn about safe transitions of care, and optimizing health care value. Through these experiences, students will address the following goals: 1. Prepare professionals with systems-level skills necessary to provide care that is safe, effective, patient-centered, timely, efficient, and equitable. 2. Integrate health systems sciences with clinical care. 3. Cultivate respectful professionals.

IDIS 5220. PLAN. This course introduces students to the basic concepts and principles of research and their application to clinical practice and population health in preparation for their Research Immersion. The course provides the necessary research skills and competencies to develop a basic but complete and structured research proposal for the upcoming Research Immersion experience. The Pathway2PLAN process (completed during the FCC Phase during the Discovery course) is required for admittance into the PLAN course. Approval required.

IDIS 5233. Learning Communities—Foundations of Clinical Care. The Learning Communities FCC course integrates with the student’s clerkship experiences and builds on the students’ experiences Learning Communities FMK. Prior efforts addressed important professional development topics such as metacognition, clinical reasoning, ethics, leadership, and health care delivery. The Learning Communities FCC course connects these theoretical concepts and discussions with the practical and experiential learning of the students during their clerkship rotations. Students meet in College-based groups for discussion and reflection with the College Mentors, as well as in clerkship-based groups with ethics faculty for deeper exploration of ethical issues specific to each clerkship. In sum, the Learning Communities FCC course will continue to provide nurturing environments to enhance student development as professionals by allowing for the exploration of the practical application of previously learned concepts.

IDIS 5310. CiM Multi-Specialty Elective. Throughout this two-week elective, students will shadow attending and resident physicians of their choosing in various specialties and subspecialties. The purpose of the course is to introduce students to various fields of medicine in an effort to aid in their specialty selection in the fourth year of medical school. A list of attending physicians in various specialties will be provided by the Student Representatives of Careers in Medicine (CiM). Enrolled students will be responsible for contacting physicians and scheduling their shadowing experiences over the two-week period. Two weeks prior to the beginning of the elective, a meeting with the course director(s) will outline the process for scheduling these experiences and expectations for the elective. Shadowing experiences with faculty members outside the CiM-provided list may be arranged with prior approval from the course director. At the end of the elective, students will participate in a professional development workshop and an individual exit counseling session with the Assoc. Dean for Medical Student Affairs to discuss their clinical experiences and their progress towards choosing a specialty. Students will schedule shadowing experiences for nine days of the elective and attend the professional development workshop and the exit counseling session. Shadowing of one physician is limited to a maximum of three days. Enrolled students will submit their shadowing schedule to the course director(s) prior to the start of the elective for approval. The professional development workshop will address topics such as CV writing and public speaking. At the conclusion of the two-week rotation, students will be familiar with the schedules, daily activities, patient populations, and consultations in several specialties. The shadowing experience and exit counseling session with the Assoc. Dean for Medical Student Affairs will provide students with information that will aid their specialty selection and CV.

IDIS 5314. Critical Thinking and Logic in Medicine. Critical Thinking, logic and reasoning play a fundamental role in everyday patient care as well as research design, interpretation and application. While development and application of evidence based medicine is crucial to advancement of all aspects of clinical practices, it is of little significance without sound critical thinking and logic reasoning. Students will join anesthesiologists and/or Intensivists in the operating rooms and ICU from 7:30 to 12:00 every other day throughout the elective period. Didactics about the principals of critical thinking in medical practice and other similar high intensity environments will be offered in form of lectures, discussion groups and simulations. Pre acquired knowledge in the field of anesthesia and critical care is not required. Problem solving skills development will be based on concept of critical thinking and asking the right questions. Resources to acquire needed knowledge to apply in problem solving will be provided to students and will consist mainly electronic resources available on the internet and intranet followed by physicians practicing in the respective fields. At the conclusion of the two-week elective rotation, students will be able describe and apply principals of critical thinking and reasoning to patient care. Application of logic and reasoning to individual patient care as well as generating the relevant hypothesis on which future literature search and study design should answer. While problems in anesthesiology and critical care will serve as examples, the understanding, concepts and resources will be generalizable to all fields of medicine. Objective pre- and post-course evaluation will be given to track learning and help in improving the course for future students. The course will be accomplished in a casual setting to enhance student development as professionals by allowing for the exploration of the practical application of previously learned concepts.

IDIS 5316. Medicine and Media. As the interest in science and medical news grows and more media outlets exist to report and analyze such news, the need will increase for medical professionals who are skillful at using media of all types to convey information. An understanding of various facets of how science and medical news are produced and reach the public may be gained through working with Vanderbilt communications professionals engaged in reaching the public with such news. Students in this elective will join various units of Vanderbilt’s Communications team, both as observers and participants, in order to learn some of the fundamentals of medical and health communications at a major academic medical center. These opportunities will include, but not be limited to, local and national media relations; getting hands-on experience with medical journalism by researching and writing a press release or a story for the VUMC Reporter or other Medical Center publications; working with the social media team to learn about the uses of media such as Facebook and Twitter to convey news, as well as health and wellness information; working with the Division’s web team to learn about the presentation of news and information via the web; receiving a more institution-wide perspective by working with the editors of Research@Vanderbilt, our website devoted to research news; and working with VUMC faculty who are frequently called on by the press to convey health information to the public. The students will also be assigned readings and viewings that provide context to the daily hands-on experience. At the conclusion of the two-
The Hearing Loss Team will consist of audiologists, surgeons, speech-language pathologists, and physicians to serve and investigate adult patients who exhibit acquired communication or vestibular disorders as a result of damage to the central or peripheral nervous system. Acquired neurogenic disorders commonly are associated with stroke, dementia, Parkinson’s disease, Lou Gehrig’s disease, tumor, and traumatic brain injury, which result in aphasia, dysarthria, and apraxia of speech. The most commonly diagnosed vestibular disorders include benign paroxysmal positional vertigo (BPPV), labyrinthitis or vestibular neuritis, Menière’s disease, secondary endolymphatic hydrops, and perilymph fistula, which result in a range of difficulties including vestibular disturbance and difficulties with balance and falls. Students will spend a portion of their time with the Neurogenics Team and a portion of their time with the Vestibular Team. Care providers from the departments of Hearing and Speech Sciences, Neurology, Physical Medicine and Rehabilitation, Trauma, and Otolaryngology will participate in this elective.

IDIS 5327. Adult Communication Disorders. This two-week elective will offer students an opportunity to focus on adult communication disorders. Students will be provided didactic course work in the relevant areas and will observe and, when appropriate, participate in surgical, medical, and clinical care of affected patients. Students will join an interdisciplinary team of clinicians, scientists, and physicians to serve and investigate adult patients who exhibit acquired communication or vestibular disorders as a result of damage to the central or peripheral nervous system. Acquired neurogenic disorders commonly are associated with stroke, dementia, Parkinson’s disease, Lou Gehrig’s disease, tumor, and traumatic brain injury, which result in aphasia, dysarthria, and apraxia of speech. The most commonly diagnosed vestibular disorders include benign paroxysmal positional vertigo (BPPV), labyrinthitis or vestibular neuritis, Menière’s disease, secondary endolymphatic hydrops, and perilymph fistula, which result in a range of difficulties including vestibular disturbance and difficulties with balance and falls. Students will spend a portion of their time with the Neurogenics Team and a portion of their time with the Vestibular Team. Care providers from the departments of Hearing and Speech Sciences, Neurology, Physical Medicine and Rehabilitation, Trauma, and Otolaryngology will participate in this elective.

IDIS 5329. Pediatric Communication Disorders. This two-week elective will offer students an opportunity to focus on pediatric communication disorders. Students will be provided didactic course work in the relevant areas and will observe and, when appropriate, participate in surgical, medical, and clinical care of affected patients. Students will join an interdisciplinary team to serve and investigate pediatric patients who exhibit hearing loss, dysphagia (a feeding and swallowing disorder), or Autism Spectrum Disorder (ASD). ASD includes Autism, Pervasive Developmental Disorder, not otherwise specified and is characterized by a disturbance of normal neural organization and connection resulting in impaired social interaction and communication. Students will spend a portion of their time with the cochlear implant and hearing aid teams, a portion of their time with the dysphagia team, and a portion of their time with the ASD team. The Hearing Loss Team will consist of audiologists, surgeons, speech-language pathologists, and a number of other individuals who work with these children. Surgical and surgical observations will take place in various clinics within the Bill Wilkerson Center and in the Otolaryngology Clinic at Children’s Hospital. The Dysphagia Team will consist of otolaryngologists and speech-language pathologists, and a number of other professionals who work with these children. Clinical and surgical observations will occur within the Complex AeroDigestive Evaluation Team (CADET) Clinic. The ASD Team will consist of care providers and scientists from the departments of Psychiatry, Psychology, Developmental Pediatrics, Hearing and Speech Sciences, Neuroscience, and a number of other individuals working with these children.

IDIS 5330. Critical Thinking and Logic in Medicine. Critical Thinking, logic and reasoning play a fundamental role in everyday patient care as well as research design, interpretation and application. While development and application of evidence based medicine is crucial to advancement of all aspects of clinical practices, it is of little significance without sound critical thinking and logic reasoning. Students will join anesthesiologists and/or intensivists throughout their opening cases and ICU from 7:30 to 12:00 every other day throughout the elective period. Didactics about the principles of critical thinking in medical practice and other similar high intensity environments will be offered in form of lectures, discussion groups and simulations. Pre acquired knowledge in the field of anesthesia and critical care is Not required. Problem solving skills development will be based on concept of critical thinking and asking the right questions. Resources to acquire needed knowledge to apply in problem solving will be provided to students and will consist mainly electronic resources available on the internet and intranet followed by physicians practicing in the respective fields. At the conclusion of the two-week elective rotation, students will be able describe and apply principals of critical thinking and reasoning to patient care. Application of logic and reasoning to individual patient care as well as generating the relevant hypothesis on which future literature search and study design should answer. While problems in anesthesiology and critical care will serve as examples, the understanding, concepts and resources will be generalizable to all fields of medicine Objective pre and post course evaluation will be given to track learning and help in improving the course for future students. A subjective evaluation will also be collected from each student. Students will receive feedback at the end of each critical exposure (7 days) on the elective and at the conclusion of the post-course evaluation. The course will be graded on a pass/fail basis. Students should report to MCE 3161 on the first day.

IDIS 5335. Aerospace Medicine Elective, USAF. This course provides an overview of flight and operational medicine introducing students to unique patient populations and occupational exposures. Field experiences include visits to a fire station, hypobaric chamber, and an incentive flight. Students will visit the National Museum of the U.S. Air Force, exploring past and present airframes in the USAF inventory. Finally, an outdoor mass casualty triage exercise will be conducted at the National Center for Medical Readiness at Calamityville.

IDIS 5340. Introduction to Business of Medicine. This elective rotation is designed to give a medical student an introduction to the business aspects of health care. The goal of this course is to have students begin to get an appreciation of how modern health care and business interact. Whether in a small single provider clinic or a large academic medical center, core business principles are used to manage and deliver quality health care. Specifically, this rotation will focus on the business principles of: health care economics, operations, leadership, strategy, and finance. We will use a combination of didactic lectures, outside reading, and direct mentor shadowing to give students exposure to these business topics. By the end of the rotation, a student should be able to: a) describe key concepts within each of the five business topics, discuss specific examples of how these topics are applied in the delivery of health care, and have a basic understanding of government insurance products and policies, and how they relate to health care delivery.

IDIS 5500. USMLE Step 1 Independent Study. This course requires students to undertake a two-month period of independent study for Step 1 of the United States Medical Licensing Exam. This course is required prior to advancing into Immersion phase requirements.

IDIS 5610. AE: Med School 101. Students will develop and conduct “Med School 101”, a 3-week course for gifted high school students as part of Vanderbilt University’s Program for Talented Youth (PTY). The course begins early in the spring semester, when third-year students can participate in optional training at the Center for Teaching. Later in the spring, under the direction of the Senior Associate Dean for Health Sciences Education, students create a curricular plan, develop teaching sessions and arrange for other teaching sessions and clinical experiences. Finally, students implement the course during the first three weeks in July.

IDIS 5613. ISC: Critical Illness. Regardless of a student’s individual specialty choice, each will be called upon to provide competent care for critically ill patients during their residency training. The successful management of critically ill or injured patients requires a thorough understanding of physiology, pathophysiology, and pharmacology. By combining targeted teaching with hands-on experiences in different ICUs across the medical center, Critical Illness will deepen knowledge of the anatomy, physiology, pathophysiology, imaging, biostatistics, ethics, microbiology, neuroscience, nutrition, and behavioral medicine inherent in critically ill patients. In the first week, all students will be immersed in Critical Care Skills Week, a highly regarded simulation-based learning experience that culminates in receipt of Fundamentals of Critical Care Support (FCCS) certification. All students will spend a week caring for patients in the Medical, Surgical, Burn, Neurologic, Cardiovascular, or Pediatric ICU. The other 2 weeks will be spent in learner-focused case-based education facilitated by ICU faculty, ICU radiology and palliative care sessions, additional patient-
centered experiential learning opportunities and hands-on workshops in ICU-specific technical skills such as airway management, ventilator manipulation, and chest tube placement. Fulfills the acute care course requirement.

IDIS 5614. ISC: Community Healthcare—Patients, Populations and Systems of Care. In Community Healthcare, students will be equipped to effectively address predictors of poor health on an individual level, and to engage health care systems in ways that promote meaningful change. Students will move beyond an investigation of the social determinants of health to provide individualized patient care and engage the health care system. Regardless of the field students decide to enter, they will encounter vulnerable populations of patients and should be equipped to address patient needs in ways that promote healing. Foundational science topics will include population health, health policy, health determinants, community engagement, systems engineering, public health, organizational management, health ethics, resource utilization, implementation science, behavioral science, and communication science. The course is comprised of clinical experience in a safety net clinic, seminar sessions with local and national experts to facilitate skill development, two projects with presentations that integrate core concepts, and journal club participation with a presentation. The course will equip students with a “portable toolkit” of skills that can be used in any field of practice in any location. This course qualifies for primary care credit.

IDIS 5618. ISC: Global Health. Health promotion, disease prevention and control, and mortality reduction require an interprofessional, multidisciplinary response for multidimensional problems. Whether from the point of view of humanitarian interest, research competitiveness, full utilization of our educational resources, or the need for global expertise for modern America, the global health agenda has emerged as an increasingly important component of higher education in the U.S. In this on-the-ground experience, students are placed at Vanderbilt partner sites in various locations around the world and are introduced to key topics and concepts in global health including diseases, root causes, and both clinical and public health interventions common in low-resource settings. Foundational science topics include Biostatistics, Epidemiology, Immunology, Microbiology, Neuroscience, Nutrition Science, Pathology and Pathophysiology, Pharmacology, Physiology, Social Sciences, Behavioral Science, and Health Systems. Health and developmental issues across nations and cultures that require collective (partnership-based) action are highlighted. The course is taught through digital modules, on-site exposures to patients, patient settings and understand the current and future areas of research and medical practice as related to diabetes. This course is designed to teach

IDIS 5621. ISC: Cardiovascular Disease. The course will expose the student to a broad range of cardiovascular diseases, focusing on foundational science as well as clinical topics that are applicable to students going into any specialty in which they will care for patients with cardiovascular diseases. Foundational science topics will include cardiovascular physiology and hemodynamics, electrophysiology, anatomy, histology, and pharmacology. All students will participate in a core series of didactics and workshops, but will be allowed to choose clinical experiences in cardiology, cardiothoracic surgery, vascular surgery, and cardiothoracic anesthesia. Clinical care will occur in a variety of settings including the wards, intensive care unit, operating room, outpatient clinics, and diagnostic laboratories. The course will provide flexibility to allow the interested student to have experiences in at least two clinical specialties. In addition, the curriculum is designed to encourage teamwork and knowledge sharing through interactive conferences and work groups.

IDIS 5622. ISC: The Skinny on Obesity—What Every Physician Should Know. Rates of obesity are rising all around the world and, as physicians we confront it daily regardless of our specialty. Whether clinicians or surgeons, general practitioners or specialists, pediatricians or internists, researchers, educators, administrators, public health professionals and even in our own families and circles of friends, the issue of obesity will be a near daily encounter. For most of us, obesity management will not be the primary focus of our job, but we can still play a key role in the prevention and care of unhealthy weight and its comorbidities. This course is designed for 3rd and 4th year medical students in an immersion format, combining mentored clinical experiences with additional organized learning opportunities. It is four weeks in length, offered at 5 points during the academic year, and incorporates up to eight students in each offering. In this course students will have the opportunity to prepare for how they can effectively address obesity in their anticipated area of practice. They will have the opportunity to participate in a variety of interdisciplinary patient care settings, which range from general to subspecialty, from medical to surgical, and from clinical to research to community. Through these clinical experiences and additional learning activities, students reinforce their knowledge of this disease, build skills in its management, and contribute to the prevention and treatment of obesity.

IDIS 5623. ISC: Getting Hooked—Addiction. Addiction is a highly prevalent, chronic brain disease that affects nearly every organ system in the body. A leading cause of morbidity and mortality, addiction is preventable and treatable, but only about 10 percent of those affected receive appropriate treatment. Patients with problems related to addiction may present for care in any setting across the health care system. It is therefore essential for all physicians to be well versed in the basic principles of addiction medicine. This 4-week course will be an opportunity to synthesize the neuroscience of addiction with clinical skills in assessment and treatment of addictive disorders. The primary goals of the course are to train future physicians: to recognize addiction as a chronic brain disorder; to effectively screen for substance use disorders in varied clinical settings; to treat or refer patients for specialized treatment as indicated; and to consistently approach patients with addiction with compassion and respect. In addition, this course serves as an opportunity to return to the foundational medical knowledge underlying the pathophysiology and treatment of addictive disorders and integrate this knowledge with clinical care. Key concepts of foundational medical knowledge will be reviewed including neuroanatomy, mechanisms of neurotransmission, pharmacology, epidermology, and cell biology as they relate to addiction medicine. Students will use online modules and independent study for instruction on foundational medical knowledge and in-class time will be focused on discussion and integration of the material with clinical experience.

IDIS 5624. ISC: Diabetes Mellitus. Diabetes mellitus is a worldwide pandemic; one in twelve United States adults now suffers from the disease, and in the near future this number will likely increase to one in ten. Physicians in any specialty/subspecialty can expect to care for patients with diabetes, especially because patients with diabetes have higher rates of hospitalization, surgical complications, cardiovascular disease, infection and other morbidities. Therefore most, if not all, physicians in training should be competent in basic treatment of diabetes in the inpatient and outpatient settings and understand the current and future areas of research and medical practice as related to diabetes. This course is designed to teach
our medical students how to care for the patient with diabetes mellitus, regardless of their specialty of choice, as well as to understand the basic science, social effects, bearing on public health, and human impact of this disease. Additionally, biomedical research in diabetes involves many fields of research such as cardiovascular disease, physiology, molecular biology, genetic medicine, cell biology, and neuroendocrinology. As a medical center whose goal is to train future researchers and leaders in medicine, Vanderbilt must offer experiences in diabetes patient care and research to its students. This immersion will include components of clinical training as well as an academic project exploring the limits of current scientific knowledge about diabetes care and treatment.

IDIS 5625. ISC: Clinically Applied Immunology. The human immune system impacts every subspecialty in medicine. An understanding of normal and pathologic immunity is critical for physicians to provide the highest quality patient care. This Integrated Science Course (ISC) teaches immunology in a highly clinically applied manner using a variety of topics and subspecialties. Areas of clinical focus include autoimmune diseases, food and drug allergy, opportunistic infections, transplantation, and commonly encountered medications used for suppressing the immune system. Opportunity exists for deeper clinical dives into each of these areas. During the course, students spend time in a variety of clinical settings tailored in part to meet their specific clinical interests. Clinical engagement during the ISC occurs in a variety of areas including allergy/immunology, gastroenterology/inflammatory bowel disease, infectious diseases, dermatology, rheumatology, and solid organ/stem cell transplantation. The course employs a variety of learning formats including didactic lectures, team-based learning, journal club and case discussions, and online learning modules to fulfill learning objectives focused on understanding the clinical applications and relevance of immune-related diseases.

IDIS 5626. ISC: Medical Imaging and Anatomy. Imaging is an essential component of the diagnosis and treatment of disease across all fields of medicine. Every physician interacts with medical imaging both in emergent and non-emergent settings. Therefore, each student requires knowledge of the utility, indications, acquisition, interpretation, limitations, and risks of medical imaging. Furthermore, it is crucial that physicians understand how imaging affects patient care and management and how it fits into the larger health care delivery system. This course will strengthen and expand upon prior learning in anatomy, embryology, pathophysiology, and neuroscience, and introduce students to radiobiology and radiation effects, imaging physics, imaging ethics, and radiologic pharmacology. The course will consist of “general” components for all students and “selective” components in one of the following: Chest & Body Imaging, Musculoskeletal Imaging, or Neuroimaging. Opportunities to individualize the course include gross anatomy lab, reading room experience, and student presentations. Self-paced recorded lectures and modules will accompany live lectures, small group discussions, and clinical exposure to medical imaging. This course is taught through online modules/lectures, clinic exposures to medical imaging in Diagnostic and Interventional Radiology. Additionally, students will get hands-on experience in basic ultrasound scanning technique. After this course, students will feel confident with key anatomy, be able to make “do-not-miss” imaging diagnoses, and be able to use imaging more safely and appropriately.

IDIS 5627. ISC: Injury, Repair, and Rehabilitation. In the US, injuries are the leading cause of death among persons ages 1-44 years of age, which results in more deaths than non-communicable diseases and infectious diseases combined. In this course, students will be exposed to the continuum of injury, repair, regeneration, and rehabilitation through the multidisciplinary viewpoints of emergency medicine, trauma surgery and associated surgical subspecialties, such as anesthesia, hematology & transfusion medicine, physical & occupational therapy and speech-language pathology. Students will spend portions of their clinical experience on the trauma service supplemented by rotations through rehabilitative, recovery, and palliation settings. Didactics will focus on shock, hemostasis and thrombosis, wound healing and regeneration of skin, bone and nerves, nutrition, acute and chronic pain management, speech-language pathology, age and co-morbid factors, brain injury, case-based learning across the continuum from acute to long-term recovery, as well as palliative care and death. Integrated foundational sciences are anatomy, epidemiology, ethics, immunology, implementation science, neuroscience, nutrition sciences, pathology, pathophysiology, pharmacology, radiobiology, social sciences, system sciences. Following experiential anatomic learning and practice, successful students will obtain four-year American College of Surgeons Advanced Trauma Life Support (ATLS) certification (except in section 6, when students will audit the ATLS course but not receive certification), as well as audit the Advanced Surgical Skills Exposure for Trauma (ASSET); both courses are coordinated using the facilities of the Program for Advanced Anatomy and Simulated Skills (PASS) and the Center for Experiential Learning and Assessment (CELA). This course will serve as a prerequisite to the Advanced Clinical Experience in Trauma.

IDIS 5628. ISC: Infectious Diseases. A WHO report warns that infectious diseases are spreading more rapidly than ever before and that new infectious diseases are being discovered at a higher rate than at any time in history. This elective is for students with an interest in learning more about how to diagnose and treat patients with infectious disease. Students will also learn how to use antibiotics appropriately and manage the complications of HIV and other chronic infections. The diversity of patient population will afford the student a breadth of experience in evaluating and managing patients with infectious diseases. In this clinic-driven experience, students are placed in a series of 3 week-long clinical experiences in various settings including inpatient, outpatient and laboratory medicine and are introduced to key topics and concepts in infectious diseases including symptoms, diagnosis, treatment, vaccines, and antibiotic stewardship. Methods to establish an etiologic diagnosis and rational use of antibiotics are emphasized. Foundational science topics include Epidemiology, Immunology, Microbiology, Virology, Pathology and Pathophysiology. The course is taught through online modules/lectures, clinic exposures to patients, team-based learning, and case presentations.

IDIS 5629. ISC: Sexual Health and Medicine. This course will vastly deepen students’ knowledge of sexual medicine and reproduction, focusing on the foundational science as well as clinical experiences that will provide students with the knowledge they need to care for patients of all ages. Students will pursue these topics far deeper than what is taught in second-year clinical clerkships. Foundational science topics will be addressed in a series of team-based learning activities that will integrate foundational science with relevant clinical experience. This course will integrate the anatomy, physiology, pathophysiology and pharmacology of sexual function and reproduction with the clinical skills necessary to interview and assess patients in these areas of medicine. Students will become familiar with a core set foundational published literature and pursue one area more deeply leading to a brief paper. At the completion of this course, students will thoroughly understand the mechanisms of sexual function and reproduction and should be able to assess sexual development, sexual dysfunction, and fertility and to develop an appropriate and sensitive treatment plan. Students should be able to approach patients about the sensitive topics of sexual health, function, identity and reproduction with knowledge, compassion and cultural sensitivity.

IDIS 5630. ISC: Healthy Aging and Quality Dying. Regardless of specialty choice, all physicians will encounter aging and death among their patients, family members, and selves. In the Healthy Aging and Quality Dying ISC, students will take care of both aging and dying patients in a variety of settings ranging from inpatient geriatric wards, outpatient geriatrics primary care clinics, nursing homes and assisted living facilities, and selected subspecialty settings. Didactics will delve into the foundational sciences of the epidemiology of aging, the physiology of aging and its clinical implications (e.g. falls, delirium and cognitive impairment, immune senescence, drug selection/dosing), communication skills, ethics at the end of life, systems-based care, and behavioral sciences in order to answer meaningful clinical questions. By expanding knowledge in these foundational sciences through small group discussions, case studies, and simulation exercises, students will be better equipped to slow down the aging process of their patients, prevent iatrogenic events in older adults, and improve quality of life based on what is most important to their patients.

IDIS 5631. ISC: Emergency Care: Cell to System Science. Regardless of one’s chosen specialty, all physicians interact with the emergency department (ED)-maybe as a specialist on call or as a primary physician referring patients to the ED. The Emergency Care ISC will bring you from the cellular level to the system level. By delving into core pharmacologic principles you will develop an approach to the care of an acutely poisoned...
You will explore the core concepts of teamwork and apply them to the School of Medicine / Courses of Study course provides the environment for students to focus on further honing the status of the patient and determine if the team can help facilitate development occurring in earlier Learning Communities courses.

In the WLHS, student teams provide comprehensive longitudinal care to a patient panel through direct care and care navigation across multiple settings, including clinic visits, communicating with inpatient services if the patient is admitted, home visits, work or school visits, and ER visits (during daytime hours). Each patient will have a care plan that will guide the care that the team provides. Depending on the needs of the patient, the team will conduct care navigation by contacting the patient approximately every four weeks to check on the status of the patient and determine if the team can help facilitate services to the patient. This course meets the acute care requirement.

IDIS 5632. ISC: Health Systems Science in a Working-Learning Health System. In this course interprofessional student teams participating in a working-learning health system (WLHS) will gain experience managing a high risk, complex panel of patients while advancing knowledge in health systems science, social and behavioral determinants of health, and continuous quality improvement. In the WLHS, student teams provide comprehensive longitudinal care to a patient panel through direct care and care navigation across multiple settings, including clinic visits, communicating with inpatient services if the patient is admitted, home visits, work or school visits, and ER visits (during daytime hours). Each patient will have a care plan that will guide the care that the team provides. Depending on the needs of the patient, the team will conduct care navigation by contacting the patient approximately every four weeks to check on the status of the patient and determine if the team can help facilitate services to the patient. The course will conduct ongoing quality improvement measurements to ensure that the care being provided is having a positive impact on patients. Formal course work topics will include health systems science and the health care system, socio-ecologic and structural determinants of health, health policy and health economics, organizational management, public health, quality improvement processes, and interprofessional practice. Students from Medicine, Nursing, Pharmacy, Physician Assistant, and/or Social Work will be members of the student team. Students will work at the Clinic at Mercury Courts. This course meets the primary care requirement. We believe that this innovative approach to workplace-based learning will enable interprofessional student teams to positively impact the health of their patients while decreasing resource utilization. This course is the first in a series of three courses that students can complete in the working-learning health system. The second rotation in the WLHS series is the ACE in Population Health in a Working-Learning Health System.

IDIS 5633. Learning Communities IMM. The Learning Communities-Immersion course builds on prior efforts addressing student professional development that occurring in earlier Learning Communities courses. Students continue to explore vital issues of their development as professionals with further readings and small group discussions within the nurturing College environment. The sessions are designed in a developmentally appropriate manner to maximize discussions and learning based on the clinical experiences of the students. The Learning Communities-IMM course provides the environment for students to focus on further honing their own skill sets regarding ethics, cognition and leadership prior to graduation and the beginning of residency training.

IDIS 5640. ACE: Population Health in a Working-Learning Health System. This course is the second in a series of courses that students can complete in the three-course working-learning health system (WLHS) series. The clinical experience is similar to the clinical experience in the ISC in Health Systems Science so students have additional opportunities for longitudinal patient care. In addition, students who complete this ACE may be eligible for QI advanced track credit (FHD requirement). Interprofessional student teams in the WLHS will continue to gain experience managing high risk, complex panels of patients while advancing knowledge in health systems science, social and behavioral determinants of health, and continuous quality improvement. In the WLHS student teams provide comprehensive longitudinal care to patient panels through direct care and care navigation across multiple settings, including clinic visits, communicating with inpatient services if the patient is admitted, home visits, work or school visits, and ER visits (during daytime hours). Each patient will have a care plan that will guide the care that the team provides. Depending on the needs of the patient, the team will conduct care navigation by contacting the patient approximately every one to two weeks to check on the status of the patient and determine if the team can help facilitate services to the patient. This innovative approach to workplace-based learning will enable interprofessional student teams to positively impact the health of their patients while decreasing resource utilization.

IDIS 5641. ACE: Panel-based Care in a Working-Learning Health System. This course is the third and final that students can complete in the working-learning health system (WLHS) series, and the clinical experience is similar to the clinical experience in the ISC in Health Systems Science so students have the best opportunity for optimal longitudinal patient care. In addition, students who complete this ACE are eligible for QI advanced track credit (FHD requirement). As in the preceding two courses, interprofessional student teams in the WLHS will continue to gain experience managing high risk, complex panels of patients while advancing knowledge in health systems science, social and behavioral determinants of health, and continuous quality improvement. In the WLHS student teams provide comprehensive longitudinal care to patient panels through direct care and care navigation across multiple settings, including clinic visits, communicating with inpatient services if the patient is admitted, home visits, work or school visits, and ER visits (during daytime hours). Each patient will have a care plan that will guide the care that the team provides. Depending on the needs of the patient, the team will conduct care navigation by contacting the patient approximately every one to two weeks to check on the status of the patient and determine if the team can help facilitate services to the patient. This innovative approach to workplace-based learning will enable interprofessional student teams to positively impact the health of their patients while decreasing resource utilization.

IDIS 5651. Learning Communities IMM Unit 1: Applied Ethics. Medical errors threaten the moral sense of self of the physician. All physicians commit errors, some of them costly in terms of increased patient morbidity and mortality while others are just nagging reminders of our professional limitations. Learning how to respond to one’s own errors in responsible and healthy ways, and considering how to best provide leadership through our response to others’ errors are important in practicing medicine successfully and maintaining one’s ethical equilibrium. This session will explore the ethical challenges and implications in addressing this developmentally important issue for becoming mature practitioners of medicine.
IDIS 5652. Learning Communities IMM Unit 2: Lifelong Learning. Change is ubiquitous in healthcare making continuous adaptation necessary for clinicians to provide the best possible care to their patients. Developing the capabilities of a Master Adaptive Learner will provide future physicians with strategies for learning in the healthcare environment and for managing change more effectively. The concept of a Master Adaptive Learner combines adaptive expertise with an approach to learning based on self-regulation. Learners will explore an evidence-based model for the Master Adaptive Learner that provides a shared language and scaffolding to facilitate exploration and conversation about both successes and struggles during the learning process.

IDIS 5653. Learning Communities IMM Unit 3: Situation Leadership and Diagnosing. All leadership situations are not equal. Trying to lead all followers in every situation in the same manner does not demonstrate effective leadership. Being able to target leadership style to the developmental level of the follower(s) improves the productivity of the follower(s) while also eliminating frustration for all involved. This session will allow students to explore concepts related to the Situational Leadership II model and its application.

IDIS 5654. Learning Communities IMM Unit 4: Problem Solving. Physicians and leaders are both routinely called upon to solve difficult problems. The best physicians and leaders are able to move past the "easy" solutions to the "right" solutions. In this session, students will explore different approaches to problem solving and their importance to physicians and leaders alike.

IDIS 5655. Learning Communities IMM Unit 5: Priority Setting. Highly effective leaders are able to focus their energy and efforts on selected projects to allow for the maximum benefit, while avoiding being pulled in multiple different directions. Effective leaders are able to clearly articulate their guiding principles and focus that allows them to say "yes" to projects that align with their goals and mission, while saying "no" and avoiding projects that do not align. This session builds on the Time Management session during the LC-FMK course. Students will explore the impact of clearly set priorities and develop their own professional vision statements.

IDIS 5656. Learning Communities IMM Unit 6: Change Management. Most people hate change. People will often work very hard to maintain the status quo even in the face of mounting evidence that change is necessary. The most successful leaders are able to effectively guide their followers through periods of change, both large and small. Too often change efforts fail because all of the focus is on what to change without any explicit consideration and planning regarding how to manage the change. In this session, students will explore change management models from the business literature and consider applications to the medical arena.

IDIS 5657. Learning Communities IMM Unit 7: Dealing with Ambiguity. No one likes uncertainty, especially not physicians who often feel like they must have "all of the answers." Ambiguity and uncertainty often lead to stress and decreased satisfaction among practicing physicians. Developing strategies to manage uncertainty are essential for physicians in their leadership as well as in their practice of medicine.

IDIS 5658. Learning Communities IMM Unit 8: Leading and Managing Up. Many individuals early in their journey to becoming leaders are confronted with the question "Is it possible to lead well when I am not the one in charge?" Ninety-nine percent of all leadership occurs not from the top but from the middle of an organization. There are well described characteristics and actions involved with being a good follower, as well as for "leading up" from a position lower in a leadership hierarchy. Becoming a good follower and developing the skills to lead from the middle can greatly impact an individual's leadership success.

IDIS 5701. FHD: Advanced Communication 1. Students will build effective communication skills with patients through exploration of topics including health literacy, cross-cultural competence and use of technology in the clinical setting.

IDIS 5702. FHD: Advanced Communication 2. Students will learn effective communication skills for having difficult conversations, spanning the spectrum from professionalism conversations with colleagues to end-of-life and goals of care discussions with patients.

IDIS 5711. FHD: Quality Improvement 1. Students will analyze their clinical microsystem using systems-level tools such as fishbone diagramming and flowcharting, and identify an area for improvement.

IDIS 5712. FHD: Quality Improvement 2. Students will propose a change to their clinic microenvironment and enact that change, collect data and reflect on their results.

IDIS 5713. FHD: Quality Improvement 3. Students will understand the basis of sustaining change and will suggest next steps for continued improvement.

IDIS 5714. FHD: Patient Safety. Students will create virtual presentations of their projects to improve quality of care/patient safety from their clinical microenvironment. Students will discuss strategies for sustaining change and will suggest next steps for continued improvement.

IDIS 5715. FHD: Quality Improvement & Patient Safety Advanced Track. Students will demonstrate knowledge of the ability to analyze their clinical microsystem using systems-level tools, identify an area for improvement, then propose and enact a change, collect data and reflect on results. Students will also understand the basis of sustaining change and will suggest next steps for continued improvement.

IDIS 5716. FHD: Quality Improvement. Students will demonstrate knowledge of the ability to analyze their clinical microsystem using systems-level tools, identify an area for improvement, then propose and enact a change, collect data and reflect on results. Students will also understand the basis of sustaining change and will suggest next steps for continued improvement.

IDIS 5721. FHD: Interprofessional Education 1. Students will learn about other professionals' roles in patient care as well as the unique cultures, values, roles/responsibilities, and expertise of other health professionals; will learn their scope of practice; and will learn how an interprofessional team works together to provide patient care. They will observe interprofessional teamwork within the medical center.

IDIS 5722. FHD: Interprofessional Education 2. Students will integrate knowledge of their own role and roles of other team members to appropriately assess and address healthcare needs of patients. They will work collaboratively with other team members, seeking out other professionals for consultations in order to formulate an interprofessional care plan for mutual patients.

IDIS 5723. FHD: Interprofessional Education 3. Students will recognize components of a functional effective team dynamic, including recognizing how their own uniqueness of experience level, expertise, culture, power, bias and hierarchy within the health care team contributes to effective communication, conflict resolution, and positive interprofessional working relationships.

IDIS 5731. FHD: Health Policy: Institutions, Politics, and Advocacy. Students will be introduced to key features of the U.S. health care system as well as how to assess the performance of this system along multiple dimensions of importance. The course will supplement student knowledge about the social determinants of health and previous patient advocacy experience with insights about the key institutions, processes and stakeholders that shape health policy. Students will be exposed to the legislative and political histories of recent health reforms and use skills gained in the course to collaborate with colleagues in advocating for positive change.

IDIS 5732. FHD: Health Care Economics. Students will learn and apply core principles of health care economics to understand the state of the U.S. health care system and future policy directions related to market forces, medical spending, and population health. The covered material will first unpack what features make health care markets special and in turn more complex relative to other goods and services. These insights will then be used to understand the incentives, challenges and landscape of contemporary health insurance and payment models for medical care. This discussion will span public and private payers as well as patient and provider behavior under different financing models and incentive structures. The course will finish by integrating these lessons with recent policy activity related to the Affordable Care Act.
This intersession is dedicated to providing additional preparation for the Courses of Study in care Delivery (CPP-FHD). Communication barriers in complex patient care interactions. care professions, and population health. All requirements must be communicated to students in multiple sessions. Communication (AC) 1 & 2, Interprofessional Education (IPE) 1, & Population level.

IDIS 5741. Health Care Delivery Immersion I. Health Care Delivery Immersion I serves as an introduction to the Immersion Phase and teaches students details about population and community health, chronic disease management and prevention in addition to skills for addressing communication barriers in complex patient care interactions.

IDIS 5742. Introduction to Core Entrustable Professional Activities. This intersession is dedicated to providing additional preparation for the advanced patient care responsibilities in which students may engage in the fourth year. The focus is on “Core Entrustable Professional Activities for Entering Residency” as outlined by the Association of American Medical Colleges.

IDIS 5743. Health Care Delivery Immersion II. This intersession builds on student experience in the Immersion Phase by preparing students for working in an interprofessional health care team and practicing advanced communication skills to deal with difficult patient conversations.

IDIS 5744. Health Care Delivery Immersion III. This intersession introduces students to the concepts of health care economics and policy issues pertinent to caring for patients in a large macrosystem, including details about the Affordable Care Act and payers such as Medicare, Medicaid, and private insurance.

IDIS 5755. Clinical Preceptorship Program -- Foundations of Healthcare Delivery (CPP-FHD). MSTP students will complete Advanced Communication (AC) 1 & 2, Interprofessional Education (IPE) 1, & Population Health and Prevention (PHP) by completing readings, online didactic modules, clinical assignments within the CPP course, and selected CELA experiences. Topics covered will include health literacy/numeracy, communicating medical errors, facilitating shared decision making, the health care professions, and population health. All requirements must be complete prior to graduation. Completion of the didactic material and project work will total approximately 16-20 curricular hours. Course will be listed on the transcript as part of the CPP and will be graded as pass/fail.

IDIS 5930. AE: Preparation for Internship. This course will provide students with essential knowledge and skills to enter internship (of any discipline) with confidence. Informed by interviews with residents and program directors, the curriculum will cover common clinical problems managed by interns and will review most frequently-used medications. Workplace challenges, advanced communication tasks and teaching skills will also be addressed. The course utilizes a variety of methods, including lecture, small group and panel discussion, as well as skills labs and simulation.

IDIS 6003. Research Immersion: Community & Global Health. This approach engages communities locally and globally to hasten the adoption, integration, implementation and evaluation of population health policies and practices. Potential research in community and global health includes clinical practice and investigation, public health and biomedical science, health care delivery, basic and implementation science and community-based participatory research. This research addresses community-identified priorities and establishes health issues that disproportionately affect primarily, but not exclusively, underserved populations, including middle- and low-income countries and neighborhoods and foreign-born populations (immigrants and refugees). Areas of investigation include health risks or diseases, obstacles to achieving optimal health, socio-cultural, historical and clinical aspects of caring for underserved populations, barriers to diagnosis and treatment, and strategies/interventions that motivate patients to practice positive health behaviors.

IDIS 6004. Research Immersion: Epidemiology & Informatics. Epidemiology is the science of identifying and understanding the patterns and determinants or causes of disease in human populations. Epidemiology informs policy decisions and evidence-based practice by identifying risk factors for disease and targets for preventive health care. Epidemiologic methods are used in clinical research and public health studies and assist in study design, collection and statistical analysis of data, and interpretation and dissemination of results. Biomedical Informatics focuses on the storage, retrieval and use of biomedical information for problem solving and decision-making in health care settings. Research is applicable in all areas of health care ranging from developing, evaluating and refining the computer tools available to clinicians caring for patients, and using computer applications and techniques to assemble evidence about specific topics, to managing biologic or genomic information in ways that supports discovery and guides basic science research.

IDIS 6005. Research Immersion: Ethics, Education, Policy, and Society. Ethics, Education, Policy, and Society (E2PS) studies include the ethical and social dimensions of medicine and provide understanding about how medicine both shapes and is shaped by the larger cultural and policy environments. Encompassing a broad range of disciplines in relation to medicine, including philosophy, economics, religion, anthropology, sociology and law, related studies can help foster professional competence and responsibility, while offering guidance to practitioners and policymakers working to improve the efficiency and quality of the health care system. Research projects might include historical inquiry in medicine, patients’ or physicians’ accounts of illness, along with ethical and legal aspects of health policies, technology, and genomics. Similarly, health policy studies can offer empirical insights regarding the potential impact of decisions by consumers, providers, and society by assessing policy changes or interventions on access, costs, or quality of health care.

IDIS 6006. Research Immersion: Bench to Bedside. This area includes laboratory-based research, addressing the mechanisms of disease and therapeutics, through basic, pre-clinical, clinical and translational research, including research in cell culture, animal models and human subjects and/or specimens (both identified and de-identified). The questions that are addressed range from the traditional “wet lab” types of research, involving experimental techniques with cells, tissues, biospecimens, or animal models, as well as devices, instrumentation, drug development, and computational research as well as studies in human subjects including surveys, cross-sectional studies, case series, case-control studies, cohort studies, first-in-human, proof of principle, and all phases of clinical trials. Inquiry in this area often interacts closely and/or overlaps with other areas of research as well.

IDIS 6007. Innovation Design Experience and Application Lab. This course is designed for MD students in the MIDP Program who have completed the Innovation Activism course. It takes the place of the Research Immersion for traditional MD students. Students will learn to take clinical challenges identified in the Innovation Activism course through the engineering design process from deployment of prototype to final design and clinical adoption. Students may work in teams comprised of other MIDP students, other engineers or engineering students, and clinicians. Solutions designed in this lab may be further developed from the business and regulatory perspectives in the two MIDP Integrated Science Courses. This lab will begin in September of third year and last at least three months.

IDIS 6100. Special Clinical Study—Vanderbilt. Each student arranges an independent study with a mentor and completes a period of research work. Approval required.

IDIS 6150. Special Research Study—VU. Each student assigns an independent study with a mentor and completes a period of research work. Approval required.

IDIS 6200. Special Study Non-Clinical. Each student assigns an independent study with a mentor and completes a period of medically relevant work. Approval required.

IDIS 6300. Full-Year Research. Students enrolled in this full-year research course are participating in various research activities including Vanderbilt Medical Scholars, Howard Hughes Medical Institute Research,
Global Health

IGHM 5240. Foundations of Global Health. This course introduces students to key topics, concepts and methods in global health, examining determinants of complex issues and exploring multi-dimensional approaches and interventions with a particular emphasis on low resource settings. Health and developmental issues across nations and cultures that require collective (partnership-based) action are highlighted by an interdisciplinary faculty using didactic, interactive and practical elements of instruction. At the conclusion of the course, students should be able to discuss research and evaluation methodologies commonly used in the field, identify key global health questions and design suitable projects that address the questions. This course is a requirement for the Global Health Certificate. First and second year. Fall.

IGHM 5241. Essential Skills in Global Health. This course introduces students to core research, field tools, assessment and implementation techniques, and evaluation methodologies used commonly in the field of global health. Various theories and practices that are commonly used to analyze issues and intervene in global health are explored. A key objective of the course is to examine determinants of global health and development from an interdisciplinary vantage point. Health and developmental issues across nations and cultures that require collective (partnership-based) action are highlighted. The course is taught by an interdisciplinary faculty and external resource persons using didactic, interactive and practical elements of instruction. First and second year. Spring.

IGHM 5242. Informatics for Global Health Professionals. This course serves as an introduction to medical informatics with an emphasis on global health care settings. As global health bridges both patient care and public health, so informatics in this context covers both patient-based information systems and public health information systems. International cooperation on health information system issues has resulted in both extensive knowledge repositories and a powerful set of tools and techniques that can be used by practitioners and researchers. The module consists of lectures with discussion and analysis as well as hands-on sessions with some software applications and electronic resources. This course may be taken as credit toward the Global Health Certificate. First and second year. Fall.

IGHM 5244. Ethics in Global Health. This course provides an overview of ethical issues and standards in global health, particularly with respect to ethics and international research. Its aim is to provide students in the health professions and others interested in global health with a framework in which to recognize, examine, resolve, and prevent ethical conflicts in their international work. Through readings, lectures and discussion, students will explore diverse historical and contemporary international perspectives on the concepts of ethics and health as well as formulating recommendations for prevention and resolution of ethical conflicts related to global health. This course may be taken as credit toward the Global Health Certificate. First and second year. Fall.

IGHM 5249. Case Studies in Tropical Diseases. This course will introduce tropical diseases and parasitology in a clinical case study format with student group leadership that is facilitated by faculty with substantial front-line tropical medicine training and experience. Written case protocols will be presented by faculty members and Infectious Disease fellows/Internal Medicine residents who will lead an interactive discussion involving pathophysiology, clinical presentation, differential diagnosis, diagnosis and treatment. This course may be taken as credit toward the Global Health Certificate. First and second year. Spring.

IGHM 5250. Global Health Politics and Policy. Global Health Politics and Policy introduces core global health problems facing the world’s populations today and examines the efforts taken to improve health at a global level. It focuses on the social and political movements of global health issues and how these forces created and shaped global health policy both in the U.S. and among the G8 nations from 2000-2011. First and second year. Spring.

IGHM 5272. Fundamentals of Global Health: Addressing Global Health Disparities. This elective course is designed for graduate students interested in global health and will consist of seven units: Introduction to Global Health, Health Disparities, Health Care Delivery Systems, Evidence-based Practice, Non-communicable and Communicable illnesses, Trauma and Violence and Effective, Ethical Models for Global Health Engagement. The course will focus on best practices for allocating scarce resources and engaging in interdisciplinary global health work with diverse communities from a cultural, ethical and clinical perspective. Students will engage in learning through readings, synchronous and asynchronous discussions, case studies and written assignments. This course is designed for students interested in caring for and empowering underserved populations locally and abroad.

IGHM 5280. Local Applications of Global Health. This is an elective course designed for graduate students interested in the local context of global health applications. This course will consist of weekly discussions led by interdisciplinary experts in global health, within and outside of VU. Topics will focus on interdisciplinary innovations that alleviate health disparities in diverse settings locally and abroad. Students will engage in learning through readings, attendance and participation in discussion and debates at weekly seminars and assignments. This course is designed for students interested in reciprocity in global health and caring for underserved populations locally and abroad, and builds on a diverse base of prerequisite knowledge in interdisciplinary fields pertaining to health, social justice, sustainable development, and working in interdisciplinary teams.

IGHM 5284. Planetary Health, Policy and Social Justice. This is an elective course designed for students interested in exploring the intersections between primary care, planetary health and climate change (according to WHO, currently the greatest threat to global health), social justice and policy. The causes of climate change and the resulting primary, secondary and tertiary impacts on people and communities will be examined through the lens of global health and policy. Students will work with local agencies to develop evidence-based and targeted adaptation and mitigation strategies as well as policy-based solutions, all incorporating science and engineering, political science and policy, law and economics as well
as nursing and medicine to address healthspan disparities related to climate change and social vulnerability.

Medical Education and Administration

MADM 5750. AE: Students as Teachers. The goal of this course is to prepare immersion phase medical students to become effective teachers as residents. The course offers a longitudinal didactic program, bringing the cohort together throughout the year to discuss general teaching strategies, educational theory and to review educational literature (the need for flexibility in scheduling is recognized). This is combined with an opportunity to enhance proficiency in one specific teaching environment by participating in the delivery of a particular course or program in the general curriculum. Students will practice teaching skills, gain an appreciation for evidence-based teaching techniques, and receive mentoring and feedback from established educators.

MADM 5761. AE: Student Director of Students as Teachers. Students in this course serve as year-long student directors of the Students-as-Teachers advanced elective. Under faculty guidance, student directors learn principles of course development and management, to include: establishing learning objectives, determining and scheduling an appropriate mix of learning & assessment activities, posting a syllabus, upkeep of the online learning management system, communicating with students enrolled in the course, updating the faculty course director(s), and tracking student participation. (Student directors will not assign final grades to peers.)

MADM 5771. AE: Student Director of Shade Tree. Students in this course serve as year-long student directors of ACE: Shade Tree Clinical Service Learning. Under faculty guidance, student directors learn principles of course development and management, to include: establishing learning objectives, determining and scheduling an appropriate mix of learning & assessment activities, posting a syllabus, upkeep of the online learning management system, communicating with students enrolled in the course, updating the faculty course director(s), and tracking student participation. (Student directors will not assign final grades to peers.)

Medicine

MED 5012. Physical Diagnosis. The introduction to clinical medicine course for second-year students. Emphasizes interviewing skills, acquiring a medical database, and performing a comprehensive physical examination. Utilizes a mentor system with groups of four students assigned to two faculty tutors who will guide them through history taking, patient examinations, and write-ups. Includes lectures, practical sessions, and patient encounters. Second year.

MED 5016. Diagnostics and Therapeutics. This required course is offered during the clerkship year of the curriculum. The goals of the course are to teach techniques in clinical decision making, with an emphasis on many factors that may impact the clinician’s approach to the presenting complaint, e.g. pretest probability, risks, and costs of studies; to give the students an understanding of the laboratory and radiographic tools used to work through a differential and arrive at a diagnosis; and to impart a basic understanding of treatments rendered for common disease processes that will encounter. The full-time introductory segment at the beginning of the clerkship year will be followed by weekly exposure through the year to online modules and small group activities that delve into specific presenting complaints with explicit discussion of how the clinician works through each of these clinical problems and treats the final diagnosis. Foundations of Clinical Care phase.

MED 5020. Medicine Core Clerkship. Second-year medical students participate in an eight-week, inpatient clinical clerkship under the aegis of the Department of Medicine, utilizing the clinical services of the Vanderbilt and VA hospitals. It is believed that learning is most vivid through direct experience with patients, obtaining histories, and doing physicals and laboratory studies, and that it is amplified by reading and intensive contact with members of the teaching staff and house staff. Students are given considerable responsibility under close supervision of the teaching staff.

Six weeks of the clerkship is devoted to inpatient experience. This is further divided into three rotations: one general medicine, one subspecialty medicine, and a final that may be either general or subspecialty. Each student is assigned to a faculty/resident team and functions as an apprentice physician with graded responsibility for the evaluation and management of patients admitted to the medicine service. Students participate in clinical and teaching activities of the service, including daily attending rounds, morning report, noon conferences, Grand Rounds. Students receive student-directed curricular content in the form of weekly core lectures, weekly “chalk talks” and clinical case conferences. In addition, students meet on a regular basis with an assigned Master Clinical Teacher to undergo supervised histories, physicals, and presentation with directed feedback and coaching.

MED 5302. Cardiovascular Physiology. Students will review cardiovascular physiologic principles in the setting of a high volume clinical cardiac MRI lab. Students will have the opportunity to interview patients, auscultate cardiac murmurs, review relevant records such as ECG/blood pressure measurements/heart rhythm strips; and then correlate physical exam findings and patient history with high resolution MRI imaging in a wide variety of cardiovascular pathologies. The cardiac MRI lab reviews an average of 6-8 cases a day, with cardiac conditions ranging from normal findings; atrial fibrillation; ischemic, nonischemic, and hypertrophic cardiomyopathies; congenital cases (both pre and postsurgical); pulmonary hypertension; cardiac transplant; stress testing; and cardiac valvular diseasess. A relevant cardiovascular physiologic principle will be reviewed at the beginning of each day. The physiology concepts to be reviewed will be selected depending on significance to the cases on the MRI schedule. At the conclusion of this fun and engaging two-week elective rotation, students will have reinforced their knowledge of cardiovascular physiology by combining a review of the pertinent concepts with clinically relevant and patient-oriented cardiovascular imaging cases. The combination of concept review applied to real-time clinical cardiovascular imaging will strengthen the knowledge of cardiovascular physiology in a unique and unforgettable way. This elective course will provide a unique and compelling preparation for the cardiology intern year.

MED 5304. Integrative Medicine. Students in this two-week elective will participate in helping patients develop and implement treatment plans for lifestyle and behavior change through the Vanderbilt Center for Integrative Health (VCIH). The VCIH cares for the whole person—mind, body, and spirit. Using the resources of the clinic, including health coaching, the students will develop their own personal plan for wellness. They will also learn the management of chronic pain and complex chronic disease working with a multi-disciplinary team. This will include exposure to clinical consults (medical and acupuncture), therapeutic movement classes, chronic pain skills groups, and group nutrition coaching. Students will also participate in a weekly multi-disciplinary case conference. At the conclusion of the elective, students will be able to take an integrative medicine patient history with emphasis on the patient’s perspective and experience of disease/illness and relevant psychosocial history; identify and describe the patient’s capacity for behavioral change including barriers and readiness to change; assist patients in developing a personalized plan of care; explain integrative medicine treatment plans by citing appropriate medical literature; participate in inter-professional care to develop skills in interacting with other health professionals to develop integrative health plans for patients; demonstrate understanding of relevant neuroscience research including neuroplasticity, biomechanics, adaptive behavior patterning, biopsychosocial model, and treatment plans for patients with chronic pain (e.g. rheumatologic conditions, cancer, physical trauma, neurological disease) and frequent co-morbid psychological conditions (e.g. depression, anxiety, post-traumatic stress disorder); and explain the role of central sensitization in chronic pain.

MED 5306. Prevention of Ischemic Events. This two-week elective will cover the outpatient management of cardiovascular risk, ranging from diagnosis and appropriate control of co-morbidities such as dyslipidemia, hypertension, and diabetes, to the appropriate risk assessment strategy including non-invasive vascular evaluations, to tailored interventions addressing lifestyle and medications. At the conclusion of the two weeks, students will be able to appropriately identify and diagnose cardiovascular risk factors and co-morbidities and determine the strategy for full cardiovascular risk assessment, including performing non-invasive imaging tests.
positioning the patient in a definite ten-year and lifetime cardiovascular risk category, and developing a management plan including proper lifestyle and pharmacologic interventions based on guidelines, evidence, and standard of care approaches.

MED 5308. Critical Care Medicine Basics. This course is an introduction to the field of critical care medicine. Students in this rotation are expected to become familiar with the physiology and pathophysiology of critical illness and the care of the critically ill patient. Additionally, they will be expected to integrate basic knowledge of pharmacology and physiology with clinical care and decision-making across two or more ICUs. An early exposure to the breadth of critical care is imperative for every physician in training, as throughout their career they will be expected to recognize life threatening illness and injury and know the indications for providing care. Additionally, it is important to know the long term sequelae associated with critical illness and the socioeconomics of critical care. The students will be expected to attend ICU rounds and to follow the care of 1-2 patients assigned to them who are admitted to the ICU. In addition, they will be assigned to select faculty daily to present their patient. This will require them to understand the physiology and pathophysiology of the disease process to present a working differential diagnosis. They will also be expected to attend daily teaching sessions with the select faculty based on a pre-determined schedule. This includes synthesizing information from the electronic medical record, the bedside nurses, the consulting physicians, and the primary team.

MED 5312. Clinical Rheumatology. This is an outpatient service rotation designed to immerse the student extern in the evaluation and care of patients with a wide variety of rheumatic diseases. Special emphasis is placed on the patients with rheumatoid arthritis and lupus; however, all of the inflammatory and degenerative connective tissue disorders will be seen and reviewed. There is daily contact with several rheumatologists as well as the entire staff of the Arthritis Center at Vanderbilt Hospital (physical therapy, occupational therapy, patient educator, etc.) The student will observe patient evaluations and treatment methods and will be expected to perform some new patient assessments. At the conclusion of the elective, students will know the most practical and cost effective means of efficiently planning evaluations and treatments. This rotation is especially valuable to students considering primary care and orthopaedics.

MED 5314. Introduction to Palliative Care. Students will rotate through Vanderbilt Medical Center under the supervision of palliative care specialists. Students will work with the entire multidisciplinary team during this rotation with the goals of learning to apply the fundamentals in pain and symptom management, communication at the end of life, care of the dying patient, and basics of hospice care. Students will rotate on the consultative services and the palliative care unit during the two-week block. Students will gain exposure to patients throughout the hospital from all disciplines of medicine assisting in symptom management, advanced care planning, and hospice. The medical director for palliative care at Vanderbilt University will supervise and evaluate the students on the basis of the six clinical core competencies as delineated by the ACGME. Creative structuring will allow students to make modifications to the rotation to meet individual needs. At the conclusion of the elective, students will be able to gather data as it relates to palliative care; demonstrate use of an interdisciplinary team to optimize patient care; evaluate and manage common symptoms in palliative care; identify goals of care through communication with families and patients in order to develop a plan of care that includes the patient’s wishes, medical situation, and code status; recognize signs and symptoms of impending death; and identify different aspects of suffering in palliative care patients.

MED 5322. HIV Medicine. Students will get a comprehensive look at the care of HIV patients by experiencing in-depth the complexities of HIV in both the inpatient and outpatient world. The elective involves spending one week at the Vanderbilt Comprehensive Care Clinic (VCCC- Vanderbilt’s outpatient HIV clinic), followed by one week on the inpatient Rogers Infectious Diseases service (the inpatient service which serves the majority of HIV-infected individuals). Students will have the opportunity to take histories and perform physical exams, presenting their findings to the attending provider or nurse practitioner. Content will include lectures, readings, and small group discussions on “hot topics” in HIV. Concepts such as AIDS in the global context, treatment-as-prevention, and pre-exposure prophylaxis will be addressed in these formats, with a focus on epidemiology, pharmacology, study design, ethical issues, etc. In addition, students will spend time with various members of the HIV care team, including an HIV pharmacist, dietician, clinical pharmacy RNs, case managers, and the clinical trials team highlighting the multidisciplinary nature of HIV care with a focus on pharmacology, nutrition, adherence, psychosocial issues, and clinical trials implementation. Students will attend case conferences and will round with the inpatient Infectious Diseases nurse liaison and case manager. At the conclusion of the two-week elective, students will be able to construct or formulate a history from someone living with HIV infection, with a focus on the important physical exam findings, social information, and laboratory values from each patient; describe basic pathogenesis and basic virology of HIV infection; discuss fundamentals about HIV treatment; demonstrate a familiarity with the evidence-based, multidisciplinary approach to HIV care; and explain some of the recent breakthroughs in HIV care and some of the challenges facing the epidemic from a global perspective.

MED 5324. Team-Based Geriatric Care. In this two-week elective, students will join a team of attending, resident, and interdisciplinary team members on the Vanderbilt Acute Care for Elderly (ACE) Unit in the mornings. Experiences will include diagnosis and management of geriatric syndromes including falls, delirium, dementia, and transitions of care. Students will become acquainted with several patients and present them on rounds. Afternoons will consist of geriatric primary care and consult clinics with exposure to geriatric medication management, chronic illness, and home and community-based services. In the second week students will round mornings with the VA Geriatric Evaluation and Management Unit Team, following and presenting selected patients and contrasting VA with Medicare resources. Afternoons will consist of VA Geriatric Consult and Primary Care Clinics, including a new Patient-Centered Aligned Care Team with a patient-centered medical home model. Relevant handouts and orientation materials will be provided, and students will participate in the ongoing Geriatrics and Palliative Care didactic series with rotating residents. At the conclusion of the course, students will be able to perform a functional assessment, contribute to an interdisciplinary team meeting, appreciate the clinical decision tree concept while managing patients with multi-morbidity states, and have an awareness of the array of community and institutional resources required to successfully manage transitions of care for frail elderly.

MED 5326. Health Promotion—Dayani Center. This two-week elective is for students interested in health education and health promotion in primarily outpatient rehabilitation programs. Students will observe and participate in the Cardiac and Pulmonary Rehabilitation Programs at the Dayani Center. Additionally, they may elect to spend a portion of this elective in the areas of Physical Therapy, Lymphedema, Nutrition, and Medical Fitness. Students will observe graded exercise testing and discuss with staff. At the conclusion of the elective, students will know the fundamental principles of health promotion and understand lifestyle management of common cardiovascular diseases.

MED 5328. Clinical Medicine Sub-Specialties. In this two-week elective, students will work with sub-specialists in clinics of their choosing in the Department of Medicine. Students will have the responsibility of evaluating patients, presenting patients to the attending, and then devising a management plan with the attending. Students are responsible for arranging the clinic half days (minimum 10 half days per 2 week period) with attendings to be approved by the Course Director. At the conclusion of the elective, students will have an understanding of the outpatient presentation and management of sub-syndrome patient problems, will provide an efficient patient work-up, and will have familiarity with the care provided to patients in the outpatient clinical setting.

MED 5332. Problems in Hematology. This 2 week elective will offer students an introduction to some unique problems that are often encountered in hematology and the principles of how they are managed. The list includes bone marrow failure states, thrombotic and hemorrhagic conditions, transfusion medicine, and hematologic neoplasms including lymphoma, leukemia, and myeloma. Students will spend one week
on the malignant hematologic inpatient service during which they will be given patients to follow and present during rounds. They will participate in formulating a plan of care emphasizing hematologic issues including transfusion needs, antibiotics, therapeutic options, prognosis survivorship, end of life care and the role of palliation and hospice. Didactics will focus on the diagnosis and management of patients with hematologic cancers. Students will also have the opportunity to spend time in Hematopathology, blood bank, and hematology subspecialty clinics of their choice ranging from benign to malignant hematologic and stem cell transplant. At the conclusion of the two-week elective, students will have a basic understanding of some of the unique questions often asked in hematology. They will also have a better understanding of what is involved in devising and recommending a therapeutic plan from the hematology perspective.

**MED 5336. Young Women’s Health.** This elective will offer students a two-week rotation in the Adolescent and Young Adult Health Outpatient Clinic at 100 Oaks with an Adolescent Medicine attending and residents. This clinic has a patient population that is about 70 percent female and sees a large number of visits for menstrual and gynecologic issues. Patients are evaluated for primary and secondary amenorrhea, menorrhagia, dysfunctional uterine bleeding, and dysmenorrhea. Patients are routinely counselled on initiation of contraception and are screened for sexually transmitted infections. Students will have the opportunity to observe patient encounters with the resident and/or attending and then as they feel more comfortable see the patient first and present them to the attending in order to jointly form a plan of care for that patient. At the conclusion of the two-week elective rotation, the student will be able to take a thorough menstrual history and formulate a brief assessment and plan based on presenting complaints/concerns. The student will also feel comfortable taking a sexual history and become more comfortable with various contraceptive options. In addition, the student will review the adolescent specific laws on confidentiality as they pertain to young women’s health issues.

**MED 5610. ACE: Clinical Nephrology.** This experience is designed to give the immersion phase student significant experience in practical clinical nephrology and prepare him or her for future house staff training. Students will participate in daily rounds with the nephrology attending, the nephrology fellow, and the medical resident assigned to the Vanderbilt Hospital nephrology service or the VA nephrology service. Patients with various clinical disorders including fluid and electrolyte abnormalities, acid-base disturbances, glomerular diseases, and disturbances of renal function, including acute and chronic renal failure, will be seen and discussed. Students will have the opportunity to perform renal consults and present patients to the rest of the rounding team. Frequently, the nephrology service is requested to perform emergency consultation which requires acute hemodialysis or acute plasmapheresis. Students may participate in these acute consultations, assist with acute dialysis catheter placement, and develop an understanding of renal emergencies and their treatment.

**MED 5611. AI: Medicine, VU.** A student may serve as an acting intern on the Vanderbilt general medicine service, with direct supervision by an attending and upper level resident. Acting interns may carry up to 6 patients and may perform up to 3 admissions and 2 ICU transfers daily. Patients assigned will be selected for their teaching value, and the student will be expected to function as a member of the team at a supervised intern level for patient management and communication with other health care providers. This will include preparing the admission history and physical examination, entering orders, writing daily progress notes, presenting patients on daily work rounds, caring for a near intern-level patient census and coordinating discharge planning. This format provides an excellent opportunity to evaluate and manage patients with a wide variety of interesting disease processes and allows the acting intern to take more responsibility in the care of his/her patients in preparation for intern year.

**MED 5613. ACE: Critical Care, VU.** This course is a four-week experience in multidisciplinary critical care medicine from the perspective of internal medicine. The student will be expected to fulfill much of the role of a junior level house officer, but will be closely supervised by interns, residents, and a senior critical care fellow, as well as a critical care attending. The unit is a very active critical care facility which manages a wide variety of medical emergencies using extensive monitoring and support equipment. The emphasis is on pulmonary disease, infection, and renal dysfunction, but covers all aspects of critical illness, including endocrinology, nutritional support, cost containment, and ethical issues. Teaching rounds are given daily, and these are supplemented with didactic lecture-discussions several days each week. Fulfills the acute care course requirement.

**MED 5616. AI: Medicine, VAH.** This Acting Internship on the Veterans Administration Hospital medical wards allows students to work in concert with the house staff team (assistant resident, intern, and one or two third-year medical students). The acting intern will be assigned new patients each admitting day and will be responsible for their care under the direction of the assistant resident. The acting intern’s patients will not be worked up by the regular intern. The student will be expected to attend all of the functions and keep the same hours as the house staff. This should provide an intensive experience in ward medicine.

**MED 5619. AI: Critical Care, VAH.** This acting internship in the MICU/CCU at the Department of Veterans Affairs Hospital is intended to expose medical students to a variety of important diagnostic and management issues in critical care medicine. The student should have prior general ward experience in medicine and surgery. The student will function in the combined MICU/CCU as an acting intern under the supervision of a medical resident, a pulmonary/cardiology fellow, and both a pulmonary/critical care and a cardiology attending. The student will actively participate in both general medical intensive care and cardiac intensive care rounds. The student will have an every-third-night in-house call schedule and will work directly with residents and interns. Students will take primary responsibility for patient assessment, documentation and order entry. Students may have a higher patient census than in prior ICU rotations and will assume increasing responsibility for patient care as the month progresses. During the rotation, the student will learn how to evaluate complex critically ill patients and formulate diagnostic and therapeutic plans. The student will become familiar with the principles and techniques of invasive and non-invasive monitoring. Major areas which are stressed include cardio-pulmonary pathophysiology, crisis management, ICU and CCU pharmacology, airway management and mechanical ventilation, fluid/electrolytes management, nutritional intervention, and ICU ethics. By the end of the rotation, the student should be comfortable in the initial assessment and treatment and ongoing care of the most common ICU/CCU admitting problems and will be prepared for residency ICU rotations. Fulfills the acute care course requirement.

**MED 5620. ACE: Gastroenterology, VU.** The adult gastroenterology rotation offers a broad experience in the evaluation and management of adult patients with gastrointestinal disorders such as inflammatory bowel disease, gastrointestinal bleeding, pancreatitis, jaundice, abdominal pain, the use of enteral feeding, and swallowing abnormalities. The rotation would include evaluation of hospitalized adult patients and rounds with the inpatient gastroenterology consultation service at Vanderbilt Medical Center. Students would function as a gastrointestinal consultant, participate actively in inpatient rounds, and participate in teaching conferences sponsored by the division. There would also be exposure to gastrointestinal endoscopic techniques throughout this rotation.

**MED 5623. AI: Cardiology.** A student may serve as an acting intern on the Vanderbilt inpatient cardiology services, with direct supervision by an attending and upper level resident. Acting interns may carry up to 6 patients and may perform up to 3 admissions and 2 ICU transfers daily. Patients assigned will be selected for their teaching value, and the student will be expected to function as a member of the team at a supervised intern level for patient management and communication with other health care providers. This will include preparing the admission history and physical examination, entering orders, writing daily progress notes, presenting patients on daily work rounds, caring for a near intern-level patient census and coordinating discharge planning. This format provides an excellent opportunity to evaluate and manage patients with a wide variety of interesting disease processes and allows the acting intern to take more responsibility in the care of his/her patients in preparation for intern year.

**MED 5625. ACE: Endocrinology.** This course is designed to give our medical students exposure to the myriad of endocrine disorders seen by the faculty in the Vanderbilt Division of Endocrinology, Diabetes and Metabolism. It is intended to give medical students the opportunity to evaluate patients with different endocrine disorders, with a focus on physical
exam findings, laboratory data, and radiological data. In addition, medical and surgical management of these disorders will be taught. Didactics will supplement the clinical experience and include pathophysiology of these disorders. Both diabetes mellitus and non-diabetes endocrinopathies, including thyroid, pituitary, bone, calcium metabolism and adrenal disorders, will be incorporated into this course.

**MED 5655. ACE: Geriatric Medicine.** The intent of this course is to provide students with an advanced educational experience in geriatric medicine. Students will gain familiarity with multiple geriatric syndromes: polypharmacy, gait instability, dementia, fragility, pain management, pressure sores, incontinence, osteoporosis; appreciation for continuity of care across different levels of care; and the ability to differentiate between normal aging and disease processes. Students’ knowledge of ethical issues will also be enhanced including patient autonomy, driving, and elder abuse. Students will also be able to identify and use community resources effectively, assess and treat multiple geriatric syndromes, organize management of multiple acute and chronic diseases simultaneously, and communicate sensitively and effectively with older persons and caregivers.

**MED 5680. ACE: Infectious Diseases.** Students will participate as part of the inpatient infectious diseases consultation service for at least two weeks of their rotation. They will be active participants in the initial evaluation, management, and follow-up of patients on the consult service. They should gain competence in diagnostic skills and in the management of infected patients, including the choice and use of antibiotic therapy. Special emphasis will be placed on understanding the epidemiology, pathophysiology, and natural history of infectious diseases. Students will also have a comprehensive experience in the care of HIV patients by participating in both the inpatient and outpatient settings. This portion of the experience will involve spending time at the Vanderbilt Comprehensive Care Clinic (Vanderbilt’s outpatient HIV clinic) and/or the inpatient Rogers Infectious Diseases service (the inpatient service that serves the majority of HIV-infected individuals). While in these settings, students will spend time with many members of the HIV care team, including pharmacists, dieticians, clinical pharmacy nurses, case managers, and others to better appreciate the multidisciplinary care needed to address medical comorbidities, medication adherence, psychosocial issues, and other issues pertinent to HIV-infected individuals. Learning opportunities in the course will include live sessions in the form of core content lectures, grand rounds, and/or small groups; online lectures; and recommended readings. Core infectious diseases and HIV/AIDS topics will include antibiotic selection and pharmacology; skin and soft tissue infections; endocarditis; opportunistic infections; HIV antiretroviral therapy; and others.

**MED 5691. AI: Cardiac Critical Care.** During the acting internship in Critical Care Cardiology, students will actively participate in the management of patients hospitalized in the Cardiovascular Intensive Care Unit. Duties will include the management of patients with (1) cardiogenic shock and acute heart failure, (2) complicated myocardial infarction, (3) complex percutaneous coronary and valvular intervention, (4) pulmonary arterial catheters and continuous hemodynamic monitoring, (5) ventricular support devices, (6) mechanical ventilation, and (7) cardiac arrhythmias. The student will work closely with the on-call medical resident and CVICU fellow and be expected to write admission and daily progress notes and present patients followed on daily work rounds to the entire team. The rotation will provide a significant “hands-on opportunity” for medical students to participate in the management of critically ill patients. Students will be expected to assume the role of the intern, carrying multiple patients and exceeding increased responsibility for their care in order to prepare them for residency. This will be a more robust experience than prior critical care rotations.

**MED 5700. ACE: Shade Tree Clinical Service Learning.** The Shade Tree Clinic Community Health Experience offers a profound and rich exposure to primary and specialty care medicine in a resource-limited setting at a sub-internship level of responsibility. This course is a longitudinal ACE during the Immersion Phase for senior medical students. The Shade Tree Clinic Community Health Experience is an opportunity to develop clinical case management skills in the context of complex social determinants of health. Students are exposed to community resources needed to provide holistic care to vulnerable patients. They also gain creative, critical thinking skills necessary to confront challenges faced in a resource-limited context. Participating students have the opportunity to (1) enhance clinical patient care skills, (2) mentor and teach junior students, and (3) participate in didactic/skill sessions for advancement of clinical, advocacy, and leadership skills. Students will be expected to schedule 20 clinic shifts throughout the course and complete a final project (or equivalent), which may include leadership and/or staff roles. Clinical skills and knowledge will be assessed incrementally throughout the course.

**MED 5730. ACE: Cardiovascular Diagnostics.** This course will emphasize the development of skills in EKG interpretation and cardiovascular physical diagnosis. In addition, students will become familiar with the full spectrum of cardiovascular imaging modalities. The aim will be to appreciate their relative strengths and weaknesses as well as indications, techniques, and interpretation. The student will see patients in consultation with cardiology faculty at Vanderbilt and the Nashville VA Medical Center. Regular bedside physical diagnosis rounds will be held with senior Vanderbilt faculty. The student will also be instructed in the use of a heart sound simulator which has been demonstrated to improve diagnostic skills. There will be didactic sessions on EKG interpretation and cardiovascular imaging (including stress testing, nuclear cardiology, echocardiography, coronary angiography, and cardiovascular MRI). Finally, weekly conferences to attend include: Clinical Cardiology (2), Echocardiography, Nuclear Medicine, and Cardiology Grand Rounds.

**MED 5735. ACE: Palliative Care.** Students will rotate through VUMC, the VA Hospital, and community hospice agencies under the supervision of palliative care specialists. Students will follow their own patients and work with an interdisciplinary team (IDT). This opportunity will allow students to learn and apply the fundamentals in pain and symptom management, how to communicate at the end of life, care of the dying patient, and hospice criteria. Students will spend roughly two weeks with the VUMC consult service, one week at the VUMC Palliative Care Unit, and one week at the VA. They will also work several days with community hospice members, child life specialists, chaplains, case managers, social workers, and nurses. At VUMC and the VA Hospital, students will work with the inpatient consultative team and see patients throughout the hospital from all disciplines of medicine assisting in symptom management, advanced care planning, and hospice information. During their time with hospice, they will accompany members of the IDT on home visits and learn more about their various roles in end of life care. The palliative care physicians and nurse practitioners will supervise and evaluate the students on the basis of the six clinical core competencies as delineated by the ACGME. Creative structuring will allow students to make modifications to the rotation to meet individual needs.

**MED 5740. ACE: Pulmonary Consult.** This course consists of seeing all pulmonary consultations at VU Hospital, presenting the cases to conferences and rounds, participating in pulmonary laboratory testing, fiberoptic bronchoscopy, and cardiopulmonary exercise testing, and attending joint pulmonary conferences. Case mix includes chronic obstructive pulmonary disease, pulmonary renal syndromes, vasculitis, sleep apnea, pulmonary nodules, infectious and non-infectious pulmonary infiltrates.

**MED 5760. ACE: Rheumatology.** Time will be spent primarily in the rheumatology clinic at the Vanderbilt clinic and the VA Hospital (VAH). Students will have an opportunity to be involved in the consultation from the hospital with the rheumatology team at VUMC and VAH. Students will have an exposure to several clinics with different rheumatologists each day and they will observe patient evaluations and treatments. Materials for study will be given. There will be an expectation from a student to perform patient assessment especially in terms of history taking and physical examination focusing on rheumatology. Students will have an opportunity to attend all rheumatology conferences, in both clinical and research meetings.

**MED 5780. ACE: Medical Oncology.** This advanced clinical experience will provide the student with a broad overview of clinical oncology. Inpatient exposure will be centered at Vanderbilt Hospital, where the student will assist in the evaluation of new oncology service admissions and new consultations. The student will make morning rounds and present new cases to the oncology attending. In addition to inpatient exposure, the student can attend two to three outpatient clinics per week. During the
MED 5785. ACE: Hematology-Oncology. The goal of this course is to introduce students to the core concepts of hematology, how they are applied to patient care in the inpatient and outpatient care setting, and how various components including clinical hematology, hematopathology, blood banking, and coagulation medicine interplay to provide comprehensive hematologic care. Students will have 2 weeks of hands-on experience in the management of hematologic disorders in the inpatient setting. The remaining 2 weeks will be spent in the ambulatory clinic setting, inpatient consults and laboratory exposure.

MED 5825. ACE: Medical Ethics. This course is designed as a capstone experience in ethics, building upon the ethics components in FMK and FCC. The core activity will be participation in the activities of the clinical ethics consultation service provided to Vanderbilt Medical Center by the faculty of the Center for Biomedical Ethics and Society. Activities during this 4-week ACE will include directed readings in areas related to the consult work, attendance at conferences, lectures, case reviews and additional work in ethics of special interest to the student’s future residency training. The course will fulfill the immersion course requirement for the Certificate in Bioethics, although being a candidate in the Certificate Program is not a requirement for taking this course. Discussion with Dr. Joe Fanning, the Director of the Clinical Ethics Consult Service is strongly recommended prior to enrollment.

MED 6100. Special Clinical Study: Medicine, VU. Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

MED 7100. AWAY ACE: Medicine. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

MED 7150. Special Research Study: Medicine, VU. Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

MED 7200. AE: Global Health. This four-week AE is an extension of the Global Health ISC and aims to provide clinical experience in the care of patients in low- and middle-income countries (LMICs), most often in resource-constrained environments. Students will assess the most common health problems encountered at the site, the usual treatment protocols, and how management differs from that in the U.S. or other developed countries. Students will learn how treatment and treatment decisions are influenced by local contexts, policies, and cultural components. In this AE, students will mindfully and ethically draw on their ‘resourcefulness’ to navigate the various constraints of working in resource-constrained settings. The hospital or clinic site is arranged by the student and approved by course director. Approval can be facilitated by Vanderbilt faculty involvement at the site. Students may elect to combine clinical work with language immersion studies (particularly Spanish). If the intended location is on the State Department Travel Alert List, additional approval will be required. Students are responsible for covering all of their personal expenses associated with the course and travel, but small amounts of funding may be available.

Neurology

NEUR 5020. Neurology Core Clerkship. The rotating students of the second-year class are alternately assigned to two 2-week (total=4 weeks) rotating blocks of clinical neurology inpatient and outpatient experience. Students are given direct responsibility for the evaluation and care of patients under the supervision of house staff and faculty. This exposure is intended to provide the students with an approach to patients with diseases of the central, peripheral, and autonomic nervous systems and skeletal muscles. At the end of the rotation, students will take the NBME exam. Departmental recognition is given to the highest NBME score. Exposures to other areas of neurology can be arranged; talk to the clerkship director. Second year.

NEUR 5315. Movement Disorders & Deep Brain Stimulation. The overall goal of this elective is to immerse students in the evaluation and treatment of patients with movement disorders. Students will spend time with these unique patients from diagnosis to advanced stages. The elective will include brief didactics on the most commonly followed disorders including Parkinson’s disease and Essential Tremor. Clinical time will be spent in the Neurology clinic diagnosing and medically treating patients. Students will be involved in the selection of patients for surgical intervention. In the operating room, student will participate in all stages of deep brain stimulation (DBS) surgery from the Neurology, Neurosurgery, and Neuropsychology perspectives. Students will assist with post-operative DBS programming. Additional time will be spent working closely with Neurosurgery in planning surgeries. Students may also attend the multidisciplinary DBS conference which occurs once a month. At the end of the two-week rotation, the student will feel confident in the presentation, examination, diagnosis, and treatment options for patients with movement disorders. Students will be expected to demonstrate a focused history and neurologically focused physical exam and will be able to articulate the indication for DBS, expected benefit, and potential risks.

NEUR 5612. ACE: General Neurology. Students will participate in a four-week general neurology advanced clinical experience that will have a flexible schedule to allow students to pursue specific interests. The schedule will be individually tailored through discussion/planning with the ACE director and involve participation in the following venues: outpatient clinic, general inpatient neurology service and adult neurology consult service. Students may choose to spend all four weeks in one venue or put together a combination of two or three venues.

NEUR 5620. ACE: Stroke. Students will participate in a four-week stroke advanced clinical experience that will involve inpatient, outpatient and procedural activities. The main venue of participation will be the inpatient stroke service where students will be responsible for carrying a census of patients (presenting on rounds), going to and assisting with stroke alerts, and participating in the education of clerkship students on the service. Students will also have the opportunity to go to stroke clinic and the angiogram suite to learn about and observe diagnostic angiograms and intra-arterial procedures. Students will also attend the weekly multidisciplinary cerebrovascular conference, and spend time with the Neuro ICU team. Students will be expected to stay for overnight call at least two times during the four-week rotation.

NEUR 6100. Special Clinical Study-Vanderbilt. Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

NEUR 7100. AWAY ACE: Neurology. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

NEUR 7150. Special Research Study-Non-VU. Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

Obstetrics and Gynecology

OBGN 5020. OB/GYN Core Clerkship. Each member of the second-year class is assigned to the obstetrics and gynecology service for five- and one-half weeks. Vanderbilt University Hospital. Each student will spend two-and-one-half weeks on the obstetrical rotation. While on the maternal-fetal service this will include daily attending rounds and involvement with the maternal-transport service. Students will also be assigned to the perinatal group practice service. In addition to being involved on labor and delivery, students will help manage obstetric patients who are followed in the Vanderbilt Clinic. Each student will spend two-and-one-half weeks on gynecology. Each student will spend one-half day per week in continuity clinic, one-half day in colposcopy clinic, and one-half day in clinical transaction project. Daily teaching rounds are conducted by the GYN oncologists. The general gynecology service provides exposure to the medical and surgical management of patients seen at the Gynecology Clinic. The two-week rotation at Baptist Hospital provides excellent exposure to operative gynecology and to gynecology in the private practice setting. In addition, students are encouraged to observe surgical cases performed by the reproductive endocrinology service. The five-and-one-half-weeks rotation provides a broad based introduction to the discipline
of obstetrics and gynecology. Included in the rotation is a lecture series given by the faculty covering general obstetrics, high-risk obstetrics, gynecologic oncology, reproductive endocrinology, and general gynecology.

**OBGN 5620. At: Maternal Fetal Medicine.** During this rotation, the student receives advanced experience in high-risk obstetrics designed to gradually provide the student with a sense of responsibility and ownership for the patients under his/her care similar to that of our first-year residents. Students help to direct both the antepartum and postpartum care of patients with preterm labor, PPROM, and pregnancy-induced hypertension. By the end of the rotation, the student is responsible for daily documentation including admission/discharge/daily progress notes, supervised order entry, and patient cross-cover reporting to the resident team. The student is expected to be familiar with the main complications of pregnancy, be confident in delivering directed and concise patient assessments and treatment plans, and have mastered the mechanisms of normal labor and delivery. Specific learning activities include daily morning obstetrical teaching rounds; attendance at resident didactics; participation in resident OB emergency simulation training when available; and overnight call on labor and delivery suite. Learning resources include one-on-one interactions with the obstetrical house staff and attendings, access to current obstetrical texts and journals, and teaching conferences.

**OBGN 5630. ACE: Maternal Fetal Medicine.** During this rotation, the student receives advanced exposure to the practice of outpatient high-risk obstetrics. Students will help to direct the outpatient antepartum care of women with common complications of pregnancy, including preterm labor, pre-gestational diabetes, chronic hypertension, PPROM, and preeclampsia. By the end of the rotation, the student should be familiar with common complications of pregnancy and be confident in delivering directed and concise patient assessments and treatment plans. Outpatient learning activities include attendance in MFM return OB and consult clinics, with additional time spent in diabetes clinic and obstetrical ultrasound. The student will develop and complete an individualized learning plan during the rotation that may involve some outpatient training opportunities. OB simulation training exercises will be utilized at the beginning and end of the rotation in order to assess student knowledge, communication skills, and procedural competencies. The student will meet with faculty preceptor(s) 1 to 2x/week to review specific cases related to learning plan objectives.

**OBGN 5635. ACE: Clinical Obstetrics.** This course is designed to be a focused experience on labor and delivery to give students more experience in basic management of obstetric patients. This course will familiarize the student with the physiology of labor and delivery. Students will be expected to work with the team learning cervical exams, basic ultrasound assessment, and delivery skills. They will also work with the team in the operating room learning skills for cesarean delivery. The student will also follow postpartum patients with the residents and attendings. An individualized curriculum will be planned which will include experience on days and nights with the team on labor and delivery and in triage. The student will be expected to assist with teaching the FCO students on the rotation as well. The student should finish this experience with confidence to complete tasks required of an intern on their labor and delivery rotation.

**OBGN 5645. At: Operative Gynecology.** Operative Gynecology seeks to integrate didactic and interactive teaching, consultative and inpatient management experience, benign gynecologic operative experience, and focused independent study to gain greater appreciation for and confidence in managing the following: 1) clinical presentation, 2) diagnostic evaluation, 3) clinical or surgical management, and 4) short or long term follow-up of common gynecologic problems. It also seeks to prepare the learner to function at the level of a GYN intern prepared to competently perform core activities listed in the Learning Objectives.

**OBGN 5655. ACE: Gynecologic Oncology.** During this rotation, the student receives training in the management of gynecologic oncology patients. The student participates in the evaluation and treatment of patients, gaining experience in surgery, colposcopy, pathology, chemotherapy, and radiation techniques. The student will be primarily responsible for 2-3 inpatients at any given time under the direct supervision of the resident on service. By the end of the rotation, the student should be familiar with the staging of different gynecologic malignancies, common treatment modalities, and important prognostic factors affecting survival.

In addition, the student will be exposed to the immediate postoperative care of the acutely ill patient. Specific learning activities include pre- and postoperative care of the oncology surgical patient, assistance in the operative cases on the service, and attendance in the private clinics of the oncology attending.

**OBGN 5660. ACE: Female Pelvic Medicine and Reconstructive Surgery.** During this rotation the student receives training and practical experience in the diagnosis and management of pelvic floor defects and dysfunctions. The student will participate in preoperative evaluation, surgery, and post-operative follow-up of operative cases. In addition, there will be exposure to conservation treatment including pelvic floor rehabilitation and insertion/management of pessaries. History and physical exam of pelvic floor defects are also emphasized.

**OBGN 5665. ACE: Operative Gynecology.** Operative Gynecology seeks to integrate didactic and interactive teaching, general and specialty clinic experience, outpatient and inpatient management experience, and focused independent study to gain a more in-depth appreciation for clinical presentation, diagnostic evaluation, clinical or surgical management, and short or long term follow-up of common gynecologic problems.

**OBGN 6100. Special Clinical Study-Vanderbilt.** Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

**OBGN 7100. AWAY ACE: Obstetrics/Gynecology.** Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

**OBGN 7150. Special Research Study-Non-VU.** Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

### Ophthalmology and Visual Sciences

**OPH 5320. Introduction to Ophthalmology.** Students will join a team of attending and resident physicians on the Ophthalmology service at Vanderbilt Hospital. Ophthalmology involves working as a consultant and primary care physician to patients both in the hospital and in the clinics. Reasons for consultation requests vary, but common requests include retinal disease, glaucoma, infectious diseases, trauma, and congenital anomalies. There will be six choices of subspecialty services on which the student may rotate over the two weeks. These include retina, glaucoma, cornea, oculoplastics, neuro-ophtalmology/consults, and pediatrics. At the conclusion of the two-week elective, students will be able to take an ophthalmology history and physical examination, arrive at a diagnosis, and understand treatment plans. Additionally, students will have familiarity with evidence-based approaches to care and the role of an ophthalmology surgeon in a teaching hospital.

**OPH 6100. Special Clinical Study-Vanderbilt.** Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

**OPH 7100. AWAY ACE: Ophthalmology.** Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

**OPH 7150. Special Research Study-Non-VU.** Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

### Orthopaedic Surgery and Rehabilitation

**ORTH 5325. Pediatric Sports Medicine.** Students will spend time with various attendings in the pediatric orthopaedic, sports medicine, and adolescent clinics at Vanderbilt. They will also attend the sports medicine fellows lecture series and a sports event if available during the rotation. They will be expected to read Hopfenleid’s text—Physical Exam of the Spine and Extremities. Upon completion of the rotation, the students will be expected to understand the diagnosis and management of pediatric
Otolaryngology

OTO 5310. Introduction to Otolaryngology. Students will join the attendings, fellows, and residents on the Head and Neck Division of the Department of Otolaryngology. This service provides surgical care for patients with benign and malignant tumors of the head and neck, including tumor resection and reconstruction, as well as airway reconstruction. It is a busy service which houses the largest inpatient census in our department. Students will see patients in the office and hospital setting, intra-operatively and post-operatively. Students will also have the opportunity to work with our speech pathologists and physical therapists as well. Students will participate in our weekly multi-disciplinary tumor board to better understand both surgical and non-surgical management of head and neck tumors. At the conclusion of the two weeks, students will be able to take a directed history, perform a basic head and neck examination, and observe and understand the basic surgical approaches to tumors of the head and neck. They will also understand basic reconstructive options for head and neck defects. Most importantly, they will understand the multi-disciplinary approach to patients with head and neck cancers.

OTO 5315. Introduction to Laryngology. The human larynx is a very complex instrument and one that enables us to communicate with each other through speaking and song, as well as protecting our airway from aspiration during deglutition. We recognize each other through our voices and our unique, individual sound helps to define who we are. Technological advances allow us to study the larynx real time in the office and help us to offer patients highly specialized, individualized treatments based on the results of these studies. In this two-week elective, students will participate in the management of patients with disorders affecting the larynx and upper aerodigestive tract, including dysphonia, breathing difficulties, and dysphagia. Students will work with a team of the attending, fellow, and residents from the Vanderbilt Voice Center in both clinic and operating room settings. In the clinic, students will learn the specialized evaluation of the patient with a vocal, breathing, or swallowing complaint. Diagnosis and treatment of common laryngological disorders will be presented and discussed. The student will also interact with and observe the voice speech and language pathologists and vocal pedagogues that complete the multidisciplinary team of the Voice Center. These practitioners provide both diagnostic support and behavioral treatment for patients. Students will be exposed to diagnostic procedures, specifically indirect laryngoscopy and laryngeal videostroscopy. In the operating room, students will observe endoscopic treatment of a variety of common laryngeal, upper airway, and esophageal disorders. These disorders may include benign vocal fold lesions, vocal fold paralysis, upper airway stenosis, and cervical esophageal stenosis. At the conclusion of the two-week rotation, students will be able to take a specialized laryngological history; perform a complete head and neck examination; discuss common disorders affecting the larynx, upper airway, and cervical esophagus; and describe the treatment of common disorders affecting the larynx, upper airway, and cervical esophagus.

OTO 5325. Clinical Rhinology. In this elective, students will have the opportunity to learn about nasal and sinus disorders and their relationship to diseases of the respiratory tract. Students will learn the pathophysiology of sinus disease and how nasal and sinus anatomy interact with allergy and other immunological diseases to affect the entire airway. The students will also learn how nasal anatomy affects patients in their ability to function in everyday life. The students will accompany the surgeon to the operating room to observe how endoscopic sinus surgery is performed. The elective will also include benign and malignant diseases of the sinuses and skull base. Students will focus on the anatomy of the skull base and the various pathologies seen clinically. Students will spend time with the skull base surgeon in both a clinical setting and the operating suite. Students will follow the patient from the time of surgery to the first post-operative appointment. In the clinics, students will learn about nasal and sinus endoscopy; CT and MR scans of the paranasal sinuses and skull base; physiology and bacteriology of the nose and sinuses and the close relationship with the lungs and pulmonary function; and medications available to treat nasal and sinus disorders. Students will also observe the allergist/immunologist. At the end of the two-week rotation, students will be knowledgeable of the common presenting symptoms of nasal and sinus disorders, and the anatomy and pathophysiology of nasal, sinus, and skull base disease. They will be able to read sinus CT and MR scans, and will be able to present a case concerning the presenting symptoms and diagnostic factors of a case and the available treatment paradigms.

OTO 5335. Introduction to Neurotologic Surgery. Neurotology is a subspecialty of otolaryngology (ENT) that deals with the evaluation and treatment of disorders of the ear, including adult and pediatric hearing loss, intracranial tumors, vertigo, facial nerve disorders, and complex infections of the ear. The specialty is multi-disciplinary and interacts frequently with other otolaryngology specialists and faculty and staff in neurosurgery, neurology, audiology, speech and language pathology, deaf education, physical therapy, and others. Students will participate in all aspects of the diagnosis and management of patients with neurotologic disorders. In the operating room students will be able to participate in and observe complex procedures such as cochlear implants, acoustic neuroma surgery, tympanic membrane reconstruction, stapedectomy, mastoidectomy and eradication of the ear, and vestibular surgery. Students will participate as members of our cochlear implant team, learning basic and advanced audiologic testing, cochlear implant evaluations, team assessment and integration, surgery, and post cochlear implant evaluation. Students will be able to participate in the activation of the cochlear implant, seeing adults and children hear for the first time. At the conclusion of the two-week rotation, students will be able to perform a specialized ear history and complex head, neck, and neurotology exams. They will be familiar with the disorders of the ear, including infections, hearing loss, vertigo, tinnitus, and intracranial tumors of the ear including meningioma, acoustic neuroma, and facial nerve disorders; the systems based practice involving multi-disciplinary care of neurotologic disorders, including working with the cochlear implant and surgical teams; surgical procedures involved with treating patients with complex otologic disorders; and the appropriate surgical set up, procedure, and equipment.

OTO 5340. Introduction to Facial Plastic and Reconstructive Surgery. Facial plastic and reconstructive surgery is an integral part of the training in Otolaryngology-Head and Neck Surgery. The face is the cornerstone of a person’s identity. Facial expression implies a revelation about the characteristics of a person, a message about something internal to the expresser. The goal of facial plastic and reconstructive surgery is to restore, maintain, or enhance a patient’s facial appearance. Students will participate in the management of patients with disorders affecting the face. Students will work with both attending and resident physicians from the division of Facial Plastic Surgery in both the clinic and the operating room. In the clinic, students will learn the specialized evaluation of the patient with congenital, malignant, traumatic, and medical conditions affecting various components of the face. Diagnosis and treatment of common facial disorders will be presented and discussed. Considerations of facial aesthetics will also be reviewed. In the operating room, students will observe treatment of a variety of common nasal, auricular and cutaneous disorders. These disorders may include facial fractures, nasal deformities, facial defects, and facial paralysis. At the conclusion of the two-week rotation, students should be able to take a specialized history pertinent to facial deformities; perform a complete head and neck examination; discuss common disorders affecting the nose, external ears, eyelids, lips, and facial skin; and describe the treatment options of common disorders amenable to facial plastic surgery.
PGY 1. Familiarization. A didactic and clinical orientation to the medical and surgical disciplines through which the student will gain an awareness of the basic sciences, essential to practice of medicine. Students will have the opportunity to see patients first and then work closely with faculty.

PGY 2. Basic Medicine: The student will be situated in the third-year level of the clerkship program in internal medicine (IM) and will complete a core clerkship in medicine. Students will complete a period of work away from Vanderbilt. Approval required.

PGY 3. Special Rotations: Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

Pathology
PATH 5310. Pathology as a Career. Physician practice in the field of pathology takes place within a diverse range of sub-disciplines under the general divisions of Anatomic Pathology (AP) and Clinical Pathology (CP). The goal of this elective is to offer an introductory experience whereby students can participate in and observe the daily activities of multiple practice settings in both AP and CP. Opportunities exist for exposure in the areas of surgical pathology, cytopathology, autopsy pathology, hematopathology, molecular diagnostics, transfusion medicine, clinical microbiology, and clinical chemistry, among others. Attendance at intradepartmental educational conferences and relevant multidisciplinary clinical conferences will be strongly encouraged. At the completion of the rotation students will have a working understanding of the general role the pathologist plays within the greater context of patient care and will have gained insight toward consideration of pathology as a potential career choice.

PATH 5620. ACE: Anatomical Pathology. This four week Advanced Clinical Experience is designed to provide in-depth exposure to the practice of anatomic pathology via a mixture of services and is an ideal way to gain additional insight into the field for both those students considering pathology as a career and those who plan to pursue clinical specialties which frequently make use of pathology services. Depending on specific student interest and service availability, the setting for this clerkship may include the sub-specialty-oriented surgical pathology service at VUMC, the general surgical pathology service at the TVHS VA Hospital, the cytopathology service at VUMC, the pediatric surgical pathology service at Monroe Carell Jr. Children’s Hospital and the autopsy pathology service at VUMC. Emphasis is placed on introducing the student to the methods of specimen processing, evaluation and diagnosis in anatomic pathology with a particular focus on the relationship that anatomic pathologists maintain with clinical colleagues in the context of patient care efforts. Opportunities will exist for students to see a range of specimen types from fine needle aspiration biopsies to multi-organ resections and full autopsies. Students will work closely with pathology residents and fellows and will participate in a variety of tasks including pathologist performed biopsies, intra-operative consultations, gross specimen evaluation and selection of histologic sections for microscopic review. Additionally students will preview microscopic slides and dictate draft reports for selected cases and will subsequently participate in case review, ancillary test ordering/evaluation and final case sign out with the attending pathologist. Students will be expected to attend the various intradepartmental educational conferences in anatomic pathology as they occur.

PATH 5630. ACE: Clinical Pathology. Clinical pathology (also known as Laboratory Medicine) includes diverse laboratory services that provide diagnostic testing for all areas of medical practice. Services include transfusion medicine/blood bank, clinical chemistry, special chemistry (including toxicology), hematology and urinalysis, special hematology (bone marrow and lymph node analysis), coagulation, microbiology, virology, molecular infectious disease, molecular genetics, cytogenetics, and immunopathology (including flow cytometry). The student may rotate in one or multiple labs with training individualized according to their interest and future plans. Training consists of a mixture of observation and both didactic and case-based learning. At the end of the rotation, the student will have an understanding of efficient use and interpretation of diagnostic and monitoring tests in the areas of the lab through which the student has rotated.

PATH 5650. ACE: Clinical Microbiology. Medical microbiology is the subspecialty of pathology concerned primarily with the laboratory diagnosis, treatment, and control of infectious diseases. Medical students with an interest in medical microbiology, pathology, or infectious diseases may elect to do a rotation in medical microbiology. Formal training in medical microbiology at VUMC is administered by the Department of Pathology, Microbiology, and Immunology and consists of an integrated program of experiential and theoretical education in the laboratory diagnosis and management of infectious diseases. The program is designed to provide concurrent training in the technical, mechanistic, consultative, managerial, administrative, and pedagogical aspects of clinical microbiology throughout the pathology residency period. Thus, medical students and pathology residents are placed in a learning environment that synthesizes the spectrum of clinical microbiology precepts within the daily routines and reinforces fundamental interconnections between clinical infectious diseases, microbial pathogenesis, and laboratory diagnostic approaches. Further harmonization of concepts in medical microbiology is achieved via consistent, direct mentoring of trainees by program faculty, medical student and resident participation in conferences covering relevant topics in infectious diseases and diagnostic microbiology, and progressive increases in trainee responsibility commensurate with experience. The goal of individual rotations is to foster a detailed understanding by trainees of the biochemical, molecular, genetic, analytical, and engineering principles of contemporary testing methodologies and link these insights to the pathophysiology, clinical presentation, therapy, and prevention of microbial diseases.

PATH 5680. AE: Forensic Pathology. Join the Nashville Medical Examiner’s Office for a month-long elective in one of the most fascinating areas of medicine, forensic pathology. Observe and participate in death-scene investigations, autopsies, and courtroom testimony. Learn about the important function a medical examiner’s office plays in the protection of the public health of our community. This elective is not just for those who are interested in pathology, but also for all medical students who want to see how disease and trauma affect the human body. Prerequisite: Third year core clerkships. Fourth year students only.

PATH 6100. Special Clinical Study-Vanderbilt. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

PATH 7100. AWAY ACE: Pathology. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

PATH 7150. Special Research Study-Non-VU. Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

Pediatrics
PED 5020. Pediatrics Core Clerkship. Each member of the second-year class is assigned to Pediatrics for five or one-half weeks. Three and one-half weeks are spent on the Vanderbilt Children’s Hospital inpatient pediatric wards. Students participate in all phases of diagnosis and treatment of a wide variety of illnesses of children and infants. Two and one-half weeks of the clerkship includes work in pediatric clinics or Meharry Hospital or community sites. Besides teaching rounds on the wards and nursery, student lectures are held three times a week. Grand rounds are held weekly and chief resident rounds are held each Thursday.

PED 5310. Adolescent Medicine. Students will participate in an outpatient Adolescent and Young Adult Health Clinic with residents and faculty. The Adolescent clinic serves patients with a variety of health care needs including primary care, acute care, sports medicine, gynecological and contraceptive care, behavioral health, and eating disorders. Students will have the opportunity to see patients first and then work closely with faculty members to develop a care plan. Students can anticipate working in multidisciplinary teams and spending time with a variety of providers. Students can also expect to participate in didactic and case based learning sessions throughout the course. The goal of this elective is to familiarize students with the scope of adolescent health care. At the conclusion of
Additionally, students should be able to perform a focused physical exam and develop a patient plan of care in conjunction with the attending.

**PED 5315. Pediatric Diabetes in the Clinical and Research Setting.** Students will join a team of attending and fellow physicians and scientists as they learn about management and discovery in pediatric diabetes. The management of diabetes in children occurs at the intersection of medical and support services. The care is managed by physicians, nurses, social workers, child life specialists, and psychologists. Within this intersection of care, the team is also dedicated to improving the management of diabetes through research. The goal of this short course is to introduce the students to this intersection. Students will participate in the initial evaluation and teaching of a patient with new onset diabetes, will be precepted in diabetes continuity clinic, and will attend clinical visits with dietitians, social workers, and psychologists. As an extension of this clinical exposure, students will learn about clinical research by attending our clinical research team meeting, receiving training in patient consent, and observing clinical trial visits. Students will also learn about the basic science of diabetes by participating in design, execution, and interpretation of research in the lab setting. At the conclusion of the elective, students will understand the presentation and management of diabetes through the contributions of a diverse provider team, the impact of diabetes on children and their families, and the opportunities for changing the course of diabetes through research from bench to bedside and back.

**PED 5325. Physiology and Pathophysiology of the Newborn.** This two-week elective will be scheduled for students who will be welcomed to the Neonatal Intensive Care Unit on the fourth floor of the Children’s Hospital. The course will be a mix of didactic talks and readings as well as patient evaluations focused on the physiology and pathophysiology of oxygen delivery and gas exchange. The student will learn the principles of evaluation and treatment of a variety of cardiorespiratory disorders including respiratory failure, hyaline membrane disease, pneumonia, sepsis, various congenital heart diseases, and congenital malformations. The student will also be learning ventilation management and blood gas analysis and the basics of fluid, electrolyte, and nutrition management. These physiologic principles are universally applicable and not limited to neonatology. At the conclusion of the elective, students will be able to list five pathophysiologic mechanisms for hypoxic respiratory failure; interpret blood gases determining alveolar minute ventilation, acidosis status, and ventilatory means to correct abnormalities; write fluid electrolyte and parenteral nutrition orders demonstrating understanding of the reason behind including each component; and will understand the basics of physical examination and evaluation of the newborn infant and correlate the observations with the pathophysiology.

**PED 5330. Pediatric Hematology-Oncology.** Students will have a broad exposure to pediatric hematology-oncology on this rotation. The rotation is divided into two one-week blocks. Students will do one week each on the inpatient pediatric hematology-oncology service and the outpatient clinics. During the inpatient week, students will join a team of residents, fellows, and attending physicians on the pediatric hematology-oncology service at Vanderbilt Children’s Hospital. Students will attend rounds and will see a broad range of both pediatric oncology and hematology diagnoses. Common reasons for oncology admissions are work-ups for possible oncology diagnoses, new diagnoses initiating treatment, chemotherapy administration, complications from treatment, and palliative care/death and dying. Common reasons for hematology admissions are diagnosis and management of bleeding disorders, workup for anemia and/or thrombocytopenia, and management of the complications of sickle cell disease. During the outpatient week, students will attend all hematology and oncology clinics in the outpatient setting. Clinic opportunities are vast and will include exposure to general oncology for routine chemotherapy and sick visits, and benign hematology and new referrals. Students will also see the evolution of this disease across these age categories, high risk and disease development beginning before birth and progressing across the lifespan. In this elective, students will be exposed to the evolution of this disease across these life stages, highlighting clear opportunities for prevention and treatment. Students will participate in a variety of clinical settings, which range from general to subspecialty, and from medical to surgical. Through these clinical experiences and a core of didactics, students will learn key points of intervention such as maternal nutrition (obstetrics), breastfeeding (newborn nursery lactation consultation), obesity treatment (multidisciplinary pediatric and adult weight management clinics, bariatric surgery), and management of its co-morbidities (lipid and endocrinology clinics). At the conclusion of the two-week elective, students will understand how obesity evolves across the lifespan, identifying opportunities for prevention and treatment; how to perform an obesity-specific assessment of patients of all ages through history taking, physical exams, and data interpretation; and how the multidisciplinary nature of treatment options can be approached through interpersonal interactions with patients, families, and members of the clinical teams.

**PED 5331. Pediatric Stem Cell Transplantation.** Students will have a broad exposure to pediatric stem cell transplant on this rotation. During the inpatient week, students will do a one-week rotation that includes both the inpatient and outpatient settings. During the inpatient time, students will join a team of fellows and attending physicians on the pediatric stem cell transplant service at Vanderbilt Children’s Hospital. Students will attend rounds and will see a patient at all stages of stem cell transplant (pre-, peri-, and post) for broad range of both pediatric oncology and nonmalignant diagnoses. Common reasons for admissions on this service are stem cell transplantation, complications from treatment, and palliative care/death and dying. During the outpatient time, students will attend all pediatric stem cell transplant clinics. Clinic opportunities are vast and will include exposure to patients who are being considered for stem cell transplant, post-transplant sick visits, and hospital follow-up. New referrals will also be seen. At the conclusion of the two-week elective, students will be able to do a history and physical examination on a stem cell transplant patient in both the inpatient and outpatient settings. Students will also be able to formulate a differential diagnosis for presenting signs and symptoms and to understand which patients are considered stem cell transplant candidates. Students will have an overall appreciation for the varied patient populations seen in pediatric stem cell transplantation from both the family and the physician/medical team perspectives. Students will also have a broad exposure to the field of academic pediatric stem cell transplantation.

**PED 5335. Obesity Across the Life Stages: Before Breast Feeding to Bariatrics.** Obesity is a condition of high prevalence worldwide. Most medical providers encounter it or one of its many co-morbidities on a daily basis. Its etiology is complex, with risk and disease development beginning before birth and progressing across the lifespan. In this elective, students will be exposed to the evolution of this disease across these life stages, highlighting clear opportunities for prevention and treatment. Students will participate in a variety of clinical settings, which range from general to subspecialty, and from medical to surgical. Through these clinical experiences and a core of didactics, students will learn key points of intervention such as maternal nutrition (obstetrics), breastfeeding (newborn nursery lactation consultation), obesity treatment (multidisciplinary pediatric and adult weight management clinics, bariatric surgery), and management of its co-morbidities (lipid and endocrinology clinics). At the conclusion of the two-week elective, students will understand how obesity evolves across the lifespan, identifying opportunities for prevention and treatment; how to perform an obesity-specific assessment of patients of all ages through history taking, physical exams, and data interpretation; and how the multidisciplinary nature of treatment options can be approached through interpersonal interactions with patients, families, and members of the clinical teams.

**PED 5340. Electronically-Engaged Pediatric Family Consult.** This elective involves working as a consultant to engage pediatric patients and their families in managing their health through information technologies. Students will work with a variety of pediatric providers in the inpatient, outpatient, and acute care settings. Consultations will focus on educating and supporting families with new diagnoses and chronic illnesses using mobile devices, the MyHealthAtVanderbilt patient portal, or other technologies to assist with disease monitoring or behavior change. With each new consultation, students will independently evaluate the patient and family, present the case to a multi-disciplinary team, explore technologies to address the information and disease-management problems, and work with the family to implement the proposed solutions. Students may also have opportunities to provide follow up from prior consultations and to participate in ongoing research studies of patient engagement through information technology. At the end of this rotation, the student will have a familiarity with the roles of information technology in health and disease management, as well as the importance of literacy, numeracy, and computer skills in facilitating patient engagement.
PED 5345. Pediatric Cardiology. Students participating in this two-week elective will be exposed to the breadth of services offered by the medical and surgical teams caring for children with congenital and acquired heart conditions. Selected faculty members and at times senior cardiology fellows will provide didactic and clinical insight relative to their area of expertise. Such areas include but are not limited to noninvasive imaging (echocardiography, MRI), cardiac catheterization, and electocardiography- the primary area whereby cardiac structure, hemodynamics and rhythm are assessed. The goal is to provide consistent core didactics and readings, supplemented with an introduction to basic cardiac assessment in the outpatient and inpatient settings. Students will be afforded an opportunity to observe the interaction of multiple team members working toward the optimal patient care plan using a variety of diagnostic and imaging modalities. At the conclusion of the elective, students will have acquired a basic understanding of how abnormalities of cardiac structure and function impact the well-being of the pediatric patient through the care continuum. Though many principles are pediatric-specific, common concepts are shared with adult medicine as well. Students will also understand basic cardiac assessment in the infant, child and adolescent, primarily in the outpatient setting including history, physical exam, and appropriate use of diagnostic studies.

PED 5611. At: Pediatric Medicine. The Pediatric Acting Internship is a course designed to give students a more robust experience of serving as an active member of the inpatient pediatric ward teams. Students will assume intern responsibilities with the supervision and countersignature of notes and orders by upper level residents, as well as participate in daily teaching conferences. Students will be assigned a number of long day shifts and a series of night shifts, with a maximum of four days off during the four week period. Patient assignments will be at the level of a census closer to that of an intern to provide increased responsibility and ensure readiness for residency. In order to ensure the strong clinical experience which characterizes this course, each position is built into the pediatrics house staff rotational schedule. Therefore, the pediatric service relies heavily on each student who is accepted into this course. We ask that each student consider his/her enrollment as a strong commitment to serve; add/drops will not be permitted.

PED 5612. ACE: Adolescent Medicine. Adolescent Medicine is a unique subspecialty in pediatrics in that it combines both primary care with consultative care for adolescents and young adults ages 12 to 22 years of age. During this ACE students will have the opportunity to learn comprehensive care of the adolescent using both a primary care and a multidisciplinary team approach. Students will have the ability to function within the Adolescent/Young Adult Clinic and will be exposed to a multidisciplinary team which includes a social worker, nutritionist and psychiatrist in conjunction with an adolescent medicine physician. At the end of the course, students will feel comfortable performing a complete psychosocial assessment of an adolescent using the HEADDSS assessment tool. They will have the opportunity to provide primary and basic gynecologic care for adolescents to include: (1) how to perform a sports clearance exam; (2) how to take an appropriate menstrual history and screen for menstrual disorders; (3) how to take an appropriate sexual history; (4) how to counsel an adolescent on contraception. Students will also gain experience in the care of adolescents/young adults with eating disorders and major depression. Evaluations will be based on the student’s ability to take a complete and appropriate history/physical and develop a cohesive and appropriate treatment plan. This course will fulfill the primary care requirement.

PED 5615. ACE: General Pediatric Neurology. Students will participate in a four-week pediatric neurology advanced clinical experience with a flexible schedule that will allow students to pursue specific interests. Given student interests, the schedule will be individually tailored through discussion/planning with the ACE director and involve participation in the following venues: outpatient pediatric neurology clinic and the inpatient teams encompassing pediatric neurology, pediatric epilepsy, and critical care.

PED 5620. ACE: Pediatric Epilepsy. Pediatric Epilepsy Advanced Clinical Experience (PEACE) is an exciting multi-disciplinary specialty that encompasses pediatric neurology, neurosurgery, neuroradiology and neuro-ophthalmology. Patients present with seizure onset ranging from birth into young adulthood. While due to many etiologies, most patients do well with standard medications achieving excellent seizure control. However, a substantial subset requires additional evaluations as well as dietary or surgical approaches. PEACE students will function within inpatient and outpatient clinical teams, as well as participate in divisional teaching conferences and also learn basic EEG reading skills. PEACE students will (1) deepen their understanding mechanisms causing epilepsy in children, (2) learn the basic principles of EEG reading and medical management of epilepsy in children, and (3) participate in multi-disciplinary evaluations of patients with epilepsy and participate in neurosurgical assessments and procedures.

PED 5625. ACE: Technology-based Engagement Consultation. Students in this course will participate in patient and family engagement consultations for children and adults admitted to the Monroe Carell Jr. Children’s Hospital at Vanderbilt (VCH) and Vanderbilt University Hospital. The purpose of this ACE is to provide the student with an understanding of the importance of patient and caregiver engagement for optimal health and health care, knowledge about the developmental process of patient and caregiver activation, and experience with recommending educational and technological interventions to promote engagement and meet health-related needs. Participation in inpatient consultations will facilitate training in promoting engagement in pediatric and adult patients with a wide variety of clinical diagnoses. Didactic experiences that will reinforce the patient care experiences include our weekly multidisciplinary Patient and Family Engagement Consultation Team Meeting, weekly Biomedical Informatics Seminar, and clinical conferences relevant to the patients being seen in consultation.

PED 5635. ACE: Pediatric Hematology/Oncology. Once students have finished this ACE, they will have a better understanding of the pathology, treatment, and survival of common childhood cancers. They will also gain experience in working up and treating anemias and bleeding disorders. These objectives are accomplished through a combination of inpatient and outpatient experience. Half of the course will be on the inpatient service where the students will be expected to follow their own patients, present on rounds, write daily progress notes, and prepare a short 10-15 minute discussion of a patient of interest. The student should also participate in walk rounds with the fellow and faculty for more informal discussion. The other half of the course will be in the outpatient clinic. While there, the student will see both new patients and patients returning for therapy. The student will take a history from the family, perform a physical exam, interpret lab tests, present these patients to the faculty, and write notes. The student will also have the opportunity to attend “specialty” clinics to see a group of patients with a focused set of problems (for example sickle cell clinic).

PED 5680. ACE: Pediatric Cardiology. The advanced clinical experience in pediatric cardiology is a four week course that aims to expose medical students to the broad spectrum of cardiac disease in children. The students will spend two weeks on the inpatient service getting exposure to acute cardiac disease and their care during perioperative period. Students will be responsible examining patients, presenting in rounds, and participating in the team care of the patients. An additional two weeks will be spent focusing on the outpatient side of cardiology. The student will participate in a variety of different cardiology outpatient clinics. Throughout the experience, the student will have the opportunity to accompany the inpatient cardiology fellow on inpatient consults. There will also be opportunities to watch cardiac catheterizations, watch a cardiac surgery, and spend time in the echocardiography laboratory.

PED 5690. ACE: Pediatric Endocrinology. Pediatric Endocrinology is a wonderful sub specialty of Pediatrics which involves studying about and caring for patients who have abnormalities involving hormonal regulation of basic body systems. Students will study physiology, pathology, molecular biology, genetics and pharmacology during the time they care for these patients. Some examples of endocrine disorders they will be expected to learn about will include: growth and pubertal disorders, disturbances in calcium homeostasis, hypo and hyperthyroidism, adrenal disorders, somatotropin disorders of sexual development and common disorders of glucose regulation. Students will also learn about how to manage acutely ill pediatric diabetes patients in the hospital setting and they will learn the fundamentals of chronic, out-patient diabetes management. Under the supervision
of the endocrine attending physician, students will see patients in the outpatient endocrine and diabetes clinics, and they will be an integral part of our ward team on the inpatient Endocrine service.

PED 5710. ACE: Pediatric Gastroenterology. The Pediatric Gastroenterology Advanced Clinical Experience (ACE) provides exposure to a broad range of gastrointestinal, nutritional, and liver diseases in both the inpatient and ambulatory settings. Students will have the opportunity to observe and participate in outpatient evaluations of infants and children referred to the pediatric gastroenterology clinic under the direct supervision of faculty attending pediatric gastroenterologist, attend endoscopic procedures, participate in inpatient pediatric gastroenterology inpatient care and consults, and attend scheduled divisional didactic conferences. The rotation provides students with experience in the workup of common pediatric symptom complexes such as abdominal pain, vomiting, diarrhea, jaundice, and many other common complaints, as well as the opportunity to participate in multidisciplinary care of complex gastrointestinal disorders such as inflammatory bowel disease and chronic liver disease. Attendance in the endoscopy suite allows familiarity with esophagogastroduodenoscopy, colonoscopy, polypectomy, and rectal suction biopsy. The rotation will include core reading on the pathophysiology and management of important gastrointestinal diseases such as inflammatory bowel disease, biliary atresia, and short bowel syndrome. The student will prepare one in-depth talk on a gastrointestinal topic of their choice and receive feedback from the attending on the content and delivery.

PED 5720. ACE: Pediatric Nephrology. Pediatric Nephrology is an exciting specialty that functions at the intersection of renal physiology, pathology, anatomy, genetics, pharmacology, and immunology. Students who participate in this Advanced Clinical Experience will actively participate in the evaluation and management of patients who demonstrate the consequences of alterations in renal development and the genes that direct development. Students will have the opportunity to see inpatients and outpatients with acute and chronic alterations in renal physiology including those with acute kidney injury, hypertension, glomerulonephritis, and chronic kidney disease in addition to those with congenital abnormalities of the kidney and urinary tract. Advanced understanding of renal physiology and pathophysiology will be an asset in any career path, because the kidney controls homeostasis for the entire body.

PED 5730. AE: Child Abuse Pediatric Medicine. Child Abuse Pediatrics is a pediatric subspecialty dealing with the medical evaluation, diagnosis, and treatment of abused and/or neglected children. Students will be a part of the Child Abuse Evaluation and Response Team based at Monroe Carell Jr. Children’s Hospital at Vanderbilt. In addition to participating in medical evaluations of children referred due to concerns of possible abuse and/or neglect, students will also be able to observe court testimony, attend forensic interviews, and participate in multidisciplinary meetings with DCS and law enforcement. Students will be expected to (1) learn how to perform a basic child abuse evaluation, including taking a thorough history and performing a full physical exam with photodocumentation, (2) learn the importance of injury biomechanics, and (3) gain an understanding of the biopsychosocial aspects of child abuse and neglect.

PED 5740. ACE: Pediatric Pulmonary Medicine. Students in this course will participate in consultations on children referred for evaluation of lung disease in the hospital and in the outpatient clinic. The purpose of this ACE is to provide the student with expertise in the clinical evaluation of pulmonary disease in infants, children, and adolescents, and students will gain expertise in the relevant history, physical exam findings, and diagnostic testing used in a pulmonary evaluation. Participation in multi-disciplinary clinics in cystic fibrosis, bronchopulmonary dysplasia, and asthma will facilitate training in caring for children with chronic lung diseases. Didactic experiences that will reinforce the patient care experiences include our weekly Pediatric Pulmonary Imaging Conference, our weekly Pediatric Pulmonary Core Curriculum Conference, and other monthly conferences that constitute our fellowship training program. Students will have the opportunity to participate in bronchoscopies.

PED 5750. ACE: Pediatric Rheumatology. Students will participate in the evaluation and care of children referred to the pediatric rheumatology program at Vanderbilt Children’s Hospital. The experience will involve direct interactions with patients and their families in both the inpatient and outpatient settings. Students will also have the opportunity to participate in divisional conferences in which patient cases and radiographic studies are discussed, and recent journal articles are reviewed. Over the course of the month, the student will gain an understanding of the presenting symptoms, exam findings, and laboratory studies of autoimmune diseases in children, as well as current treatment strategies. Through these clinical experiences, the student will gain insight into the impact of chronic disease on children and their families. The clerkship will also afford the student a unique opportunity to gain experience with the fundamentals of the musculoskeletal exam, which has broad application outside of rheumatology. Prerequisite: Pediatrics 5020. Fourth year.

PED 5760. ACE: Spanish Language Pediatric Clinic. Demographics in the USA are changing and Latinos are now the fastest and largest growing minority group in the United States. Students need to be prepared to provide effective care to Spanish speaking population. This ACE offers students the opportunity to function within the Primary care pediatric clinic as they participate in walk-in clinic visits and acute visits for Spanish speaking families, as well as exposes students to community resources that are targeted to this population. The course will focus on (1) enhancing students fluency in Spanish, (2) learning appropriate medical terminology for developmental screening, anticipatory guidance, and explaining disease processes, 3) learn about immigrant experience (Immigration process, Barriers to access to care, Education and Culture), and 4) Explore various views of disease within this population, including alternative health beliefs, use of alternative medicines and therapies, and traditional interaction with medical professionals. In addition student will be expected to participate in a small project.

PED 5800. ACE: Developmental Pediatrics and Genetics. The combined Developmental Pediatrics and Genetics ACE will blend two specialties that are important in all facets of Pediatric Medicine. This course is primarily for an outpatient experience that allows students to assess and diagnosis children who have developmental and genetic concerns. Students will work within multidisciplinary teams and have the opportunity to learn the roles of other medical providers that their patients might work with including therapists, psychologists, genetic counselors, nurse practitioners, and dieticians. During the genetics portion of the course, students will assist in diagnosis and managing children with complex genetic diseases. Students will have the opportunity to (1) deepen their knowledge of genetic conditions including dysmorphology, biochemical genetics, single gene disorders, and chromosomal disorders, (2) assess family histories, (3) participate in the medical intake that can help lead to a diagnosis, and (4) learn resources they can use throughout their career when working with patients with genetic conditions. During the developmental pediatrics portion of this course, students will start to become familiar with typical and atypical courses of childhood development. The goal of this rotation is to teach medical students how to (1) take a developmental history, (2) assess how a child is functioning currently, (3) understand what interventions that would likely help the child make developmental progress, and (4) be familiar with certain developmental disabilities that are common in our society, including Autism Spectrum Disorders and Down Syndrome.

PED 5815. AI: Neonatology. Neonatologists care for newborns with a wide variety of conditions, ranging from prematurity to surgical conditions, infections to congenital cardiac disease, and respiratory distress to genetic disorders. Students in this rotation will work in the Children’s Hospital Neonatal Intensive Care Unit on the Red Team. The Red Team cares for patients primarily with congenital heart disease, surgical and genetic disorders. This team does not attend deliveries. The AI will provide care for 3-5 patients with a wide range of conditions. The AI will be expected to pre-round on all patients, write orders and assist with TPN orders, review X-rays and lab results and contact and interact with consultants. He or she will be required to write History and Physicals, Daily Progress Notes, and Discharge Summaries. This is a high intensity AI with very complex and sick infants and is only recommended for the highly motivated and extremely responsible AI with an interest in neonatology. It is best suited for the student considering a career in neonatology or pediatric critical care or a another pediatric subspecialty. Schedule is 6am-6pm six days per week. There is no overnight call. Days off are scheduled with team members upon starting the rotation. Daily multi-specialty rounds start with both cardiology and NICU attendings at 8:30am. Required lectures are Monday, Wednesday and Thursday mornings at 7:45-8:15 a.m.
and weekly simulation sessions are generally on Fridays 7:45-8:30 a.m. Topics which will be covered and which the AI must read about include: respiratory distress syndrome, ventilator management, surgical conditions in the newborn, congenital heart disease in the newborn, nutrition of the premature infant, apnea of prematurity, jaundice and anemia in the newborn. The AI must set up biweekly review with his or her NICU attending at beginning of rotation to review written notes and daily performance. He or she will also be required to give a weekly brief talk to the team on a relevant topic of choice. Recommended reading is Fanaroff and Martin’s Neonatal-Perinatal Medicine, which is available through the digital library.

Supporting curriculum groups so the trainees have experience working in different interprofessional teams. Each team is facilitated by two LEND faculty from diverse professional groups; practicing communication skills, advocacy, negotiation skills, and applying the knowledge and skills taught in the leadership seminar to a personal or professional situation. LEND faculty in each group will participate in the evening seminars; the groups are different than the Core Curriculum Modules 2. The primary formal education portion of the VCL is the core curriculum: weekly modules and in-person core curriculum seminars at the end of each unit. Each weekly module on the LEND Moodle contains objectives, required readings or other activities, and several questions. Students, including the medical student(s) in this certificate program, are assigned to interprofessional groups of six to seven trainees, and each group submits group answers to the questions at the end of each week. On a rotating basis, each week one of the trainees serves as a group leader to maintain group accountability and productivity. For each question in the module, one trainee writes a draft response, then a second trainee reviews and edits the response. The leader compiles and formats all edited responses, provides an opportunity for the group to edit the entire answer set, and then uploads the answer set to the LEND Moodle by the deadline. The following week the faculty facilitators for the module provide feedback to the group within the documents submitted and uploads the document with the feedback into the module forum. All groups can review the feedback provided to every group. At the end of each given unit of study, there is an in-person seminar facilitated by expert LEND faculty. These seminars provide an opportunity for the interprofessional groups to work together to apply what they learned from the weekly modules to clinical cases. Anonymous peer assessments are completed at the end of each semester to maintain individual accountability and to provide feedback on leadership skills, communication skills, and professionalism. This blended educational experience combines online, asynchronous, and team-based assignments with in-person, case-based interprofessional teamwork to provide a rigorous comprehensive curriculum in neurodevelopmental disabilities.

PED 6002. Vanderbilt Consortium LEND (VCL) Leadership Seminars 1. The Leadership series fosters development of effective leadership competencies by providing opportunities for students to read research-based leadership, business administration and management, and organizational psychology literature that they would not be exposed to in their primary professional training. They glean leadership skills by teaching each other the material in the required readings; discussing case scenarios in their interprofessional groups; practicing communication skills, advocacy, negotiation skills, and conflict resolution through role playing and group discussions; and applying the knowledge and skills taught in the leadership seminar to a personal or professional situation. LEND faculty members in each group also provide training in leadership by modeling leadership skills as well as sharing their personal leadership experiences during the evening seminars and in their responses to the trainees’ critical reflections. Content for each monthly Leadership Seminar on the LEND Moodle contains learning objectives and required readings or other activities that are completed before each two-hour evening seminar. Readings are chosen from the seminal leadership, business and management, organizational psychology, and neuroscience literature. Students, including the medical student(s) in this certificate program, are assigned to interprofessional groups of six to seven trainees and in their responses to the trainees’ critical reflections. Content for each monthly Leadership Seminar on the LEND Moodle contains learning objectives and required readings or other activities that are completed before each two-hour evening seminar. Readings are chosen from the seminal leadership, business and management, organizational psychology, and neuroscience literature. Students, including the medical student(s) in this certificate program, are assigned to interprofessional groups of six to seven for the Leadership Seminars; the groups are different than the Core Curriculum groups so the trainees have experience working in different interprofessional teams. Each team is facilitated by two LEND faculty from diverse
Preventive Medicine, and each session is led by the LEND director. The formats for the evening seminars include small group case-based discussions, role-playing, and large group debriefs and discussions. After each session, each trainee applies the concepts or principles taught in the session to a scenario in her or his personal or professional life and writes a one-page critical reflection paper on which a faculty member provides feedback.

PED 6004. Vanderbilt Consortium LEND (VCL) Leadership Seminars 2. The Leadership series fosters development of effective leadership competencies by providing opportunities for students to read research-based leadership, business administration, and management, and organizational psychology literature that they would not be exposed to in their primary professional training. They glean leadership skills by teaching each other the material in the required readings; discussing case scenarios in their interprofessional groups; practicing communication skills, advocacy, negotiation skills, and conflict resolution through role playing and group discussions; and applying the knowledge and skills taught in the leadership seminar to a personal or professional situation. LEND faculty members in each group also provide training in leadership by modeling leadership skills as well as sharing their personal leadership experiences during the evening seminars and in their responses to the trainees’ critical reflections. Content for each monthly Leadership Seminar on the LEND Moodle contains learning objectives and required readings or other activities that are completed before each two-hour evening seminar. Readings are chosen from the seminal neuroscience literature. Students, including the medical student(s) in this certificate program, are assigned to interprofessional groups of six to seven for the Leadership Seminars; the groups are different than the Core Curriculum groups so the trainees have experience working in different interprofessional teams. Each team is facilitated by two LEND faculty from diverse professions, and each session is led by the LEND director. The formats for the evening seminars include small group case-based discussions, role-playing, and large group debriefs and discussions. After each session, each trainee applies the concepts or principles taught in the session to a scenario in her or his personal or professional life and writes a one-page critical reflection paper on which a faculty member provides feedback.

PED 6005. Vanderbilt Consortium LEND (VCL) Care Navigation 1. In this course learners in the VCL learn about the health care system, community services, and the social determinants of health in individuals with NDD by providing care navigation throughout the academic year to a small panel of patients seen in a local clinic. The experience will include conducting navigation interviews with the families, home visits, clinic visit, and identification of local resources that can help patients with neurodevelopmental disabilities and their families.

PED 6006. Vanderbilt Consortium LEND (VCL) Care Navigation 2. In this course learners in the VCL learn about the health care system, community services, and the social determinants of health in individuals with NDD by providing care navigation throughout the academic year to a small panel of patients seen in a local clinic. The experience will include conducting navigation interviews with the families, home visits, clinic visit, and identification of local resources that can help patients with neurodevelopmental disabilities and their families.

PED 6100. Special Clinical Study-Vanderbilt. Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

PED 7100. AWAY ACE: Pediatrics. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

PED 7150. Special Research Study-Non-VU. Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

Preventive Medicine

PM 7100. AWAY ACE: Preventive Medicine. Each student arranges an independent study with a mentor and completes a period of clinical or research work. Approval required.

Physical Medicine and Rehabilitation

PMR 5310. Principles of Physical Medicine & Rehabilitation. This course is designed to provide exposure to the practice of physical medicine and rehabilitation (PM&R) with an emphasis on musculoskeletal and neurological rehabilitation. Many of these patients have had acute illness, trauma, surgical procedures, and prolonged hospitalization and require inpatient and/or outpatient rehabilitation. The student will be asked to participate in a series of introductory lectures as well as rounds, clinics, and case discussions. The attending physician on the PM&R service will define participation in patient care. The student will be expected to participate in the evaluation of individuals with significant impairment and disability such as spinal cord injury, traumatic brain injury, stroke, amputations/complex fractures, multiple trauma and general debility. Outpatient clinics are available to expose students to the long-term problems which these patients encounter. At the conclusion of the two weeks, students will be able to take a PM&R oriented history; perform a physical examination with an emphasis on functional status and disability; formulate rehabilitation goals; and understand the importance of rehabilitation as part of the post-acute care continuum.

PMR 5611. ACE: Introduction to PM&R. Hands-on exposure to the practice of physical medicine and rehabilitation (PM&R) with an emphasis on musculoskeletal and neurological rehabilitation is offered in this course. Many of our patients have had acute illness, trauma, surgical procedures, and hospitalization and the student will have an opportunity to follow the patients post-acute. The primary responsibility is the care of those patients with spinal cord injury, stroke, amputations/complex fractures, multiple trauma, traumatic brain injury, and general debilitation. The attending physician on the PM&R Service will define participation in patient care. The student will be expected to [1] participate in the evaluation, functional diagnosis, and treatment of individuals with significant impairment and disability who require long-term hospitalization to achieve maximal independence and [2] Integrate medical and surgical knowledge in the care of patients in the hospital for rehabilitation and in the outpatient clinic. Additionally, adult and pediatric outpatient clinics are available to expose students to the long-term problems which these patients encounter.

PMR 5615. At: Introduction to Physical Medicine and Rehabilitation. This Acting Internship will include hands-on exposure to the practice of physical medicine and rehabilitation (PM&R) with an emphasis on musculoskeletal and neurological rehabilitation. Many of our patients have had acute illness, trauma, surgical procedures, and hospitalization. The student will have an opportunity to follow the patients post-acute. The primary responsibility is the care of adult and pediatric patients with spinal cord injury, stroke, amputations/complex fractures, multiple trauma, traumatic brain injury, and general debilitation. The attending physician on the PM&R Service will define participation in patient care. The student will be expected to [1] Participate in the evaluation, functional diagnosis, and treatment of individuals with significant impairment and disability who require long-term hospitalization to achieve maximal independence. [2] Integrate medical and surgical knowledge in the care of patients in the hospital for rehabilitation and in the outpatient clinic. Additionally, adult and pediatric outpatient clinics are available to expose students to the long-term problems, which these patients encounter.

PMR 7100. AWAY ACE: Physical Med & Rehab. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

Psychiatry

PSYCH 5020. Psychiatry Core Clerkship. Basic goals of this clerkship which includes psychiatry clinical rotations are to learn the fundamental techniques of psychiatric assessment, differential diagnosis, and treatment intervention. Activities include direct patient care and clinical rounds in the company of assigned faculty. The five 1/2-week placements include Vanderbilt University Hospital, Vanderbilt Psychiatric Hospital at Vanderbilt (Adult/Adolescent/Child). Second year.

PSYCH 5310. Introduction to Addiction Psychiatry. This two-week elective will offer students an opportunity to join a team of physicians on
The clinical team will be caring for patients admitted to the hospital for detoxification, diagnosis, and psychiatric stabilization and treatment planning. As substance use disorders often co-occur with depression, bipolar illness, organic brain disorders, and anxiety disorders (especially post-traumatic stress disorders, sometimes with sexual and eating disorders), the addiction psychiatry experience will expose students to a variety of common psychiatric problems. Students will be interacting with inpatients, learning about detoxification protocols, as well as seeing patients in follow up outpatient addiction clinics. Students may sit in on treatment groups for opiate dependent patients and attend a nearby Narcotics Anonymous support meeting. At the conclusion of the elective, students will be able to take a psychiatric history, perform a mental status examination, and know the basics of case formulation. Additionally, students will have familiarity with evidence-based approaches to care, understanding the role of an addiction psychiatrist as well as how addiction may present to physicians practicing in many specialties of medicine and surgery.

**PSYCH 5620. ACE: Neuropsychiatry.** This advanced clerkship (elected after completing rotations in both neurology and psychiatry) is an introduction to clinical practice and research at the interface of psychiatry and neurology. Under supervision, the student will examine patients with psychiatric and neurologic diseases affecting emotions, such as temporal lobe and frontal lobe lesions, strokes in the non-dominant hemisphere, or degenerative conditions such as Alzheimer’s Disease, Parkinson’s Disease, vascular dementia, and Huntington’s Disease. Readings will focus on the neurology of emotion, including functional neuroanatomy, experimental neuropsychology, and electrophysiology. The student may participate in research protocols involving quantitative behavioral assessment, autonomic measures, and structural and metabolic imaging of the brain. Each experience in this clerkship is unique and will be tailored to the specific interests of the student. Consequently, we can only accept one student per rotation.

**PSYCH 5625. ACE: Child and Adolescent Psychiatry Consult-Liaison.** This advanced clerkship is an introduction to clinical practice as a consultation liaison psychiatrist working with children and adolescents. Students will provide inpatient psychiatric care for children and adolescents age 4 to 18 in a multidisciplinary setting. This course offers the opportunity to take full ownership for patient care in direct collaboration with the attending physician. Students will take a case-load of patients intended to prepare them for their future role as residents. Duties will include completion of daily documentation including admission/discharge/daily notes, order entry, and patient cross-cover. Students can expect to see a varied range of ages, diagnoses, and presenting complaints. Feedback will be provided to ensure readiness for residency.

**PSYCH 5641. ACE: Inpatient Treatment of Psychosis.** Psychosis (i.e., delusions, hallucinations, disorganized thought and behavior) is a cardinal feature of several psychiatric disorders. This advanced clinical experience gives the student hands-on exposure to inpatient treatment of patients with psychotic disorders. Students will work closely with resident and attending physicians to develop differential diagnosis and treatment plans. Treatment in this inpatient setting centers on stabilization of acute and severe illness. Students will be responsible for following several patients. Assigned readings supplement patient care experiences.

**PSYCH 5645. ACE: Adult Psychiatry Consult-Liaison.** The Adult Psychiatry Consultation Service at VUMC provides psychiatric services for a broad range of patients with psychiatric and neuropsychiatric disorders in the context of medical, surgical, and obstetric (and other) inpatient settings at Vanderbilt University Hospital and Stallworth Rehabilitation Hospital. Our service is one of the busiest in the country and offers an opportunity to see the intersection of psychiatric conditions with medical illness. Commonly treated conditions include delirium, dementia, depression, anxiety, suicide attempts, substance withdrawal, conversion disorder, somatic symptom disorder, and factitious disorder. Regardless of the diagnosis, we also help with agitation management and capacity evaluation. The sub-intern will become an integral part of the team, with assigned primary focus on the care of a discrete set of patients, and will be directly supervised by Psychosomatic Medicine fellows and Psychiatry attendings. A practical focus on areas of special interest to the student may be arranged.

**PSYCH 5655. AI: Addiction Psychiatry.** Alcohol and other substance use disorders are extremely common in primary care and across a broad range of medical specialties. These conditions lead to direct medical and psychiatric co-morbidity, predispose to a host of associated conditions (e.g. cancer, cirrhosis, physical and emotional trauma, infections, and mood disorders), and complicate management of medical and surgical conditions. The mission of this AI in substance use disorders is to help provide future physicians with the fundamental clinical skills necessary to properly diagnose, treat, and refer patients with substance abuse disorders.

**PSYCH 6100. Special Clinical Study-Vanderbilt.** A variety of opportunities are available for clerkships and electives in the Department of Psychiatry that can be combined, especially where daily continuous patient care is not essential to work flow. In addition to the standard rotation sites, other experiences can be arranged. Two or three experiences can be combined within a single elective month. These may include a mixture of inpatient, consult, and outpatient experiences beyond the listed standard electives, such as forensic, geriatric psychiatry, and brain imaging research. Opportunities will be arranged to meet the interests of the individual student, potentially blending topics to provide exposure to two to three of these areas. Faculty approval is recommended at least two months prior to the start of the month’s rotation in order to develop a plan optimal to meeting the student’s interests. Approval required.
At the conclusion of the elective, students will know the various imaging
modalities and the role they play in the diagnosis of disease and manage-
ment of patients; the numerous procedures performed by radiologists and
subspecialties in pediatric radiology such as neuroradiology and
interventional radiology. The students have the opportunity to attend radi-
ology teaching conferences and many interdisciplinary conferences which
highlight imaging. In addition, we offer a host of self-directed activities
outside of reading room, such as recommended reading assignments,
learning modules, and teaching files. The successful student will learn the
radiologist role in the care of the patient and how to interact with radiolo-
gists, as well as the appropriate work up of common pediatric conditions.
The importance of the clinical question in the role of choosing the best and
most appropriate diagnostic imaging studies is emphasized.

At the conclusion of the elective, students will be able to understand the role Interventional
Radiology plays in the care of both inpatients and outpatients. They will have a
basic understanding of the breadth of procedures offered, and the
indications, complications, and post procedural care for the most
common procedures. Additionally, the students will have familiarity with
evidenced-based approaches to care.

RAD 5315. Radiology Elective. The course will provide students with
a broad exposure to the various subspecialties of radiology and will pro-
vide focused training on basic chest x-ray interpretation. The students will
spend each morning in a different reading room within the department. The
students will sit with the faculty, fellows, and residents on the service and
observe them interpreting the various studies that are read or performing
the various procedures that are done. For each reading room, there will be
a series of 5 or so “check-offs” which consists of bits of information that
student must learn in that reading room (for example, “What is the appro-
priate follow-up of an incidentally-discovered pulmonary nodule?”). The
afternoons will be spent attending didactic lectures and participating in the
focused chest x-ray “boot camp.” Each afternoon there will be a one-hour
lecture on one of the different radiology sub-specialties. Students will use
the knowledge gained in the didactic session along with content from the
boot camp handout to work through the various chest films with the course
director. Each day the films will be slightly more difficult than the day before.
At the conclusion of the elective, students will know the various imaging
modalities and the role they play in the diagnosis of disease and manage-
ment of patients; the numerous procedures performed by radiologists and
their role in patient care; and how radiologists participate as active mem-
bers of multidisciplinary health care teams in caring for patients. Students
will develop skills and confidence in the interpretation of plain chest x-rays,
particularly for common and major abnormalities.

RAD 5320. Musculoskeletal & Emergency Radiology. Students will
spend two weeks in the musculoskeletal/ emergency radiology reading
room. It’s a bustling place where MSK-subspecialty trained radiology
faculty, MSK fellows, and radiology residents interpret musculoskeletal
studies and selected studies performed in the Emergency Department,
as well as provide consultation services to a variety of physicians (emerg-
ency, trauma team, general surgery, orthopaedic surgery, infectious dis-
eases, internal medicine, rheumatology, etc.). Students will be exposed to
a broad spectrum of musculoskeletal pathology including trauma, athletic
injuries, arthritis, infection, neoplastic conditions, expected post-opera-
tive changes, and post-operative complications. Imaging modalities will
include conventional radiographs, Magnetic Resonance Imaging, Com-
puted Tomography and, possibly, ultrasonography. Students will have the
opportunity to observe interventional procedures such as fluoroscopically-
guided arthrography and CT/US-guided biopsies. In addition to daily

teaching at the PACS monitors using live cases, there will be didactic
lectures/ case presentations written specifically for this course focusing on
trauma, sports injuries, arthritis, and the basics of musculoskeletal neo-
plasms. The advantages and limitations of the various modalities utilized
will be emphasized. The didactic component of the elective will be further
enhanced by daily noon radiology conferences. The course will be of par-
ticular interest to students contemplating careers in radiology, orthopaedic
surgery, sports medicine, and emergency medicine; however, any student
interested in learning more about the musculoskeletal system or radiol-
ogy is encouraged to attend. At the conclusion of the two-week elective
rotation, students will be able to accurately describe fractures, have an
organized approach to diagnosing arthritis, recognize significant athletic
injuries on MRI, have a basic understanding of the concept of aggressive-
ness of musculoskeletal neoplasms, and have an understanding of the
strengths and limitations of the modalities used by radiologists in diagnos-
ing a variety of conditions.

RAD 5610. ACE: Diagnostic Radiology. Students will rotate through all
diagnostic subspecialties in radiology, getting a broad exposure to various
pathologies and imaging modalities. At the same time, each student will
have plenty of latitude to tailor the course to his/her academic interests
and career goals. For example, a student going into orthopedic surgery
would be free to spent most of the rotation in the musculoskeletal division,
while a student going into OB/GYN would be free to spend most of the
rotation on ultrasound. Some exposure to all subspecialties is required,
however. The purpose of this course is to acquaint medical students with
the fundamentals of diagnostic imaging and to highlight optimal imaging
pathways for various clinical conditions. The course is designed to be
relevant and suitable for all medical students, regardless of their ultimate
career choice or interests; this course is not designed solely for students
interested in pursuing a career in radiology. Besides getting daily instruc-
tion in the reading rooms by faculty, fellows, and residents, students will
be engaged in a number of other educational activities. Students will
watch Radiology faculty lecture podcasts on various topics, take online
 quizzes, attend live lectures presented by radiology residents, attend daily
Radiology noon conferences, solve weekly unknown case challenges, and
participate in at least one PBL (Practice Based Learning) exercise during the
course. The course has a pre-test and a final exam.

RAD 5630. ACE: Pediatric Radiology. This course will introduce the
medical student to the principles of diagnostic imaging in a children’s
hospital setting. The medical student experience consists of interactive
reading room sessions covering all diagnostic imaging modalities, such as
radiography, fluoroscopy, computed tomography (CT), MRI, nuclear med-
icine, and subspecialties in pediatric radiology such as neuroradiology and
interventional radiology. The students have the opportunity to attend radi-
ology teaching conferences and many interdisciplinary conferences which
highlight imaging. In addition, we offer a host of self-directed activities
outside of reading room, such as recommended reading assignments,
learning modules, and teaching files. The successful student will learn the
radiologist role in the care of the patient and how to interact with radiolo-
gists, as well as the appropriate work up of common pediatric conditions.
The importance of the clinical question in the role of choosing the best and
most appropriate diagnostic imaging studies is emphasized.

RAD 5640. ACE: Neuroradiology. The month will allow a broad exposure to the field of neuroradiology with a strong focus on review of clinically rel-
evant neuroanatomy. The primary role of the student will be as an observer,
working alongside residents, fellows and faculty as imaging studies are
interpreted and procedures are performed. Students will be responsible for
delivering a single informal presentation during the month. Prerequisite: ISC:
Medical Imaging and Anatomy or ACE: Diagnostic Radiology

RAD 5650. ACE: Adult Interventional Radiology. Interventional Radiol-
ogy is an exciting, fast paced, advanced specialty performing minimally
invasive procedures on virtually every organ in the body. This course
provides an immediate immersion into the daily life of an IR. You will be
involved in every aspect of treating patients, including outpatient clinic vis-
its, researching and working up the patient the day of the procedure, pre-
senting the patient in morning rounds, consenting and performing physical
exams, scrubbing in on the procedure, admitting and post procedural care,
inpatient rounds, and long term follow-up. You will also have the
Radiation Oncology

RADO 5315. Introduction to Radiation Oncology. This elective is designed to introduce students to the field of radiation oncology. The course requires approximately 40 hours per week. No nights or weekends. Students will be paired with attending/resident pairs which will be assigned on a daily basis by the chief resident. Each new patient, the student will be expected to go in to see the patient first and obtain a basic history and physical. This will be presented to the resident who will then review these findings directly with the attending. The team (resident/attending/student) will then discuss treatment options with the patient and formulate a treatment plan. At the conclusion of this course students will be able to take a focused oncologic history, perform a pertinent exam, and understand the basics of diagnosis, staging, and treatment options for cancer patients. They will learn about the multidisciplinary nature of oncologic care.

RADO 5620. ACE: Radiation Oncology. This 4-week clinical rotation in radiation oncology is designed for students who are interested in pursuing a career in radiation oncology. Students are integrated into the clinical workflow. They are assigned to work one on one with individual attending covering all aspects of radiation oncology including malignancies of the head and neck, lung, breast, gastrointestinal, gynecological, prostate and brain. Students work with radiation oncology residents in the initial evaluation of patients, formulation of treatment, supervision of treatment, and follow-up evaluations. Students will learn indications and techniques for radiation therapy. With each new patient, the student will be expected to go in to see the patient first and obtain a basic history and physical. This will be presented to the resident who will then review these findings directly with the attending. The clinical team (resident/attending/student) will then discuss treatment options with the patient and formulate a treatment plan. At the conclusion of this course students will be able to take a focused oncologic history, perform a pertinent exam, and understand the basics of diagnosis, staging, and treatment options for cancer patients. They will learn about the multidisciplinary nature of oncologic care.

RADO 6100. Special Clinical Study-Vanderbilt. Each student arranges an independent study with a mentor and completes a period of clinical work at Vanderbilt. Approval required.

RADO 7100. AWAY ACE: Radiation Oncology. Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

RADO 7150. Special Research Study-Non-VU. Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

Surgery

SURG 5020. Surgery Core Clerkship. This is the second-year clinical core rotation. For ten weeks, each student in the second-year class is assigned to the surgical divisions of Vanderbilt University Hospital or Nashville Veterans Administration Medical Center. Under the direction and supervision of the staff, the student takes histories, does physical examinations and assists the staff in the diagnostic evaluation and clinical management of assigned patients. Half of each student’s period of clinical work is in general surgery. The other five weeks of the clinical assignment provide two (2) rotations to the specialty services in Anesthesiology (VAH), Cardiothoracic (VUH, VAH), Interventional Radiology (VUH), Neurosurgery (VUH), Ophthalmology (VUH), Orthopaedic Surgery (VUH), Otolaryngology (VUH), Pediatric Surgery (VUH), Plastic Surgery (VUH), Renal Transplant (VUH), Urology (VUH), Vascular Surgery (VUH), and Trauma (VUH). These rotations provide exposure to a variety of patients with problems in general surgery and in the specialty fields of surgery. Members of the staff hold teaching sessions daily. Students go with their patients to the operating rooms where they are observers and assistants. An integral part of this clerkship is the core lecture series in surgery. Students will be assigned faculty preceptors for small group discussions. Second year.

SURG 5315. Introduction to Plastic Surgery. In this two-week elective, students will be exposed to the broad spectrum of plastic surgery including pediatric plastic surgery (cleft lip and palate, major craniofacial surgery, and other congenital and acquired anomalies), hand surgery, microvascular surgery, burn surgery, reconstructive surgery of the extremities, and breast, head, and neck reconstruction. They will also have the opportunity to be exposed to cosmetic plastic surgery including facial rejuvenation, breast enhancement and reduction, and other body contouring procedures. At the end of the rotation, students will have a much greater knowledge and appreciation of the role that plastic surgery plays in patient care.

SURG 5320. Cardiac Surgery Mechanical Support. This will be a two-week elective in the CVICU focusing on advanced mechanical support in cardiac surgery. The students will be given patients who are undergoing mechanical support which may include a left ventricular assist device, Impella, ECMO, etc. Students will round with the team and present these patients. After rounds they will receive hands-on simulator training and review echocardiography images on cardiac surgery patients. Lectures will discuss the types of mechanical devices and hemodynamic assessment with pulmonary artery catheters and echocardiography. If for some reason there are no mechanical devices, students will care for the most complex
patients in the ICU. At the conclusion of the elective, students will un-derstand the different types of mechanical support, know advanced cardiac physiology, understand basic transesophageal and transthoracic echocardio-graphy, have experience using echocardiography on a simulator, and will be able to present on extremely complex cardiac surgery patients.

SURG 5325. Fundamentals of Spine Surgery. Students participating in this elective will have an in-depth exposure to the diagnosis and surgical management of spine disorders. Students will spend several days each week in the neurosurgical operating room, observing and participating in cases ranging from the treatment of degenerative disorders to spinal tumors and spine trauma. Emphasis will be placed on learning key anatomic and surgical concepts that optimize patient outcomes. Students will also spend time with neurosurgery faculty in the outpatient clinic setting and develop practical experience with physical examination, clinical diagnostics, and treatment decision making. Student will participate in inpa-tient rounds, consults, and conferences such as the multidisciplinary spine conference and journal club. Much of the students’ learning will occur in a case-based manner through exposure to individual patients, but didact-ic instruction will include several key readings and interactive discussion. At the conclusion of the two-week elective, students will understand the basic paradigms used in the treatment of common spine disorders and the principles of basic neurologic exam of the spine patient. They will be familiar with the assessment of common neuroimaging and with key anatomic, physiologic, biomechanical, and oncological principles used to treat these disorders as well as non-operative strategies employed in both outpatient and emergency settings.

SURG 5330. Brain Tumors: A Surgical Perspective. This elective will offer an introductory exposure to the multidisciplinary approach used to treat patients with brain tumors. Students will spend several days each week in the neurosurgical operating room, observing and participating in cases including open and endoscopic resections of gliomas, metastases, meningiomas, and skull base tumors. They will have the opportunity to review the pathology specimens with the neuro-pathologists and attend the neurosurgical brain tumor clinic as well as the neuro-oncology and radiation oncology clinics. Students will participate in teaching rounds on the neurosurgery brain tumor service, sit in on discussions between facul-ty and patients, and attend conferences such as brain tumor board and journal club. In addition to case-based learning, students will read sev-eral key readings and discuss these with faculty. At the conclusion of the two-week elective, students will understand the basic paradigms used in the treatment of common brain tumors. They will be familiar with surgical techniques used to treat brain tumors, and they will gain insight into the multidisciplinary aspect of oncology and techniques for communicating difficult news to patients.

SURG 5335. Pediatric Neurosurgery. Students participating in this elective will have an introductory exposure to the surgical treatment of neurologic disorders in children from infancy through adolescence. Each day will begin with attendance at morning report, where overnight con-sults and upcoming cases are discussed. Students will spend several days each week in the neurosurgical operating room, observing and par-ticipating in cases including resection of brain tumors, epilepsy surgery, and treatment of hydrocephalus, spine disorders, and trauma. Students will also spend time seeing patients in the clinic; participating in inpatient rounds and consults; sitting in on discussions between faculty, patients, and families; and attending conferences such as pediatric brain tumor board and journal club. In addition to case-based learning, students will read several key readings and discuss these with faculty. At the conclu-sion of the two-week elective, students will understand the basic para-digms used in the treatment of common neurologic disorders in children. They will be familiar with surgical techniques used to treat these disorders, and they will become familiar with non-operative strategies employed in both the outpatient and critical care settings and techniques for commu-nicating difficult news to patients.

SURG 5610. ACE: Ophthalmology. Ophthalmology is a wonderful spe-cialty, combining both medical and surgical care of the eye and the peri-ocular structures. The ACE will allow medical students to participate in care delivered at the Vanderbilt Eye Institute, the Nashville Veterans’ Affairs Hospital and the Vanderbilt University Hospital’s inpatient and emergency room. Through shadowing attendings and performing ophthalmic exams, it is expected at the conclusion of the ACE a medical student will be able to (1) perform a basic slit-lamp examination and a dilated fundus exami-nation with a direct ophthalmoscope, (2) have a working understanding of the major etiologies of vision loss in the United States, including cata-racts, glaucoma, age-related macular degeneration, diabetic retinopathy and amblyopia, and (3) accurately diagnose common ophthalmic issues, including corneal abrasions, conjunctivitis and acute-angle closure glau-cocoma. Additionally, the societal impact of loss of vision on a person’s activities of daily living, the reestablishment of independence following res-toration of sight and the evolving role of the ophthalmologist providing this care should be appreciated by the medical student.
and emergency surgical patients. Students will gain experience with invasive hemodynamic monitoring, mechanical ventilation, enteral/parenteral nutrition, surgical infectious disease, and management of vasoactive medications. Topics such as cost containment, resource utilization, and medical ethics are an integral part of daily intensive care management. The patient care service consists of a surgical or anesthesia attending physician, a critical care fellow, mid-level surgical/anesthesia residents, and surgical interns. Other staff available in the unit includes clinical pharmacists, respiratory therapists, and nurse practitioners. Teaching rounds are made each morning with didactic lectures and case-discussions Monday-Thursday. Friday morning attendance of surgical grand rounds and resident teaching conference is mandatory. A course syllabus containing management protocols and educational objectives is provided to all registrants. Evaluation of the student’s performance is based on clinical knowledge, basic science application, integration into the team, and progress in learning throughout rotation. Mid-rotation and final evaluations of each student will be conducted by the critical care attendings, critical care fellow assigned to the unit, and the course director. This course fulfills the acute care requirement.

SURG 5615. ACE: Vascular Surgery. The field of Vascular Surgery has been markedly transformed over the last two decades, fueled by an explosion of technological advancement, research-supported clinical science development, and cross-disciplinary collaboration. Students enrolled in this ACE will experience a hands-on introduction to this rapidly evolving field by immersing themselves into the Vascular Surgery team at Vanderbilt Hospital. The engaged student can look forward to the prospect of caring for patients in the inpatient and outpatient settings, where he or she will learn about the various surgical manifestations and functional burdens imposed by atherosclerotic disease, aneurysmal disease, diabetes mellitus, and inherited disorders of the vascular and hematologic systems. As part of the care team, students may be asked to field consult requests from our affiliated services, and will have the opportunity to join the surgical staff in the operating theater to experience both open and endovascular surgery. By the end of this course, it is our sincere hope that the students develop an interest in pursuing a career in vascular surgery, or at least have a sound knowledge base that will help in the care of all aspects of adult medicine.

SURG 5617. ACE: Colon and Rectal Surgery. The Colorectal Surgery ACE focuses on the care of patients suffering from diseases and disorders of the colon, rectum and anus. This includes such diseases as colorectal cancer, anal cancer, inflammatory bowel disease, diverticulitis, colon polyps, and benign anorectal conditions. The goal of the rotation is to broaden the student’s understanding about the pathophysiology, clinical presentation, work-up and treatment of common colorectal diseases. The students will be exposed to all aspects of the care of the patient including diagnosis in the clinic and clinical management, operative management, post care and discharge. Students will review a variety of surgical techniques, including laparoscopic, open, and robotic cases as well as advanced endoscopic procedures and anorectal cases. Students will function as part of the colorectal team and will be assigned patients that they will follow throughout the duration of their hospital stay. They will be expected to participate on rounds as well as attend/present at the weekly colorectal surgery conference.

SURG 5618. ACE: Hepatobiliary. The hepatobiliary and liver transplant surgery rotation includes the full spectrum of benign and malignant disease of the liver, pancreas and bile ducts. This service allows exposure for rotating students to complex hepatobiliary anatomy and pathophysiology, including liver failure. Unique to this rotation is the opportunity to participate in organ procurements, a very popular operation amongst surgical students. Abdominal organ procurement offers unparalleled anatomic exposure to the abdomen and pelvis. Rotating students will participate directly in these operations and they have the right of first refusal on each procurement. As there is ample opportunity to see these operations, a waiting list is compiled for other students to travel for these operations, which are often off site. Students will have the opportunity to function as an integral member within the surgical resident clinical teams, as well as attend weekly clinics and teaching conferences, including Hepatobiliary Conference, Liver Transplant Selection Committee and Liver Team Walk Rounds. The course will focus on enhancing student clinical practice-based learning skills. Students will have the opportunity to (1) deepen their understanding of the complex anatomy and pathophysiology of the liver, (2) learn the basic principles of multidisciplinary management of liver failure, (3) review the differential diagnoses and therapeutic strategies for the liver mass and (4) understand the numerous complications seen after hepatobiliary and liver transplant procedures. Additionally, students will not be expected to stay for overnight call on a rotating schedule. However, given the emergency nature of procurements and transplants, after hour effort is common, as dictated by the on-call attending and resident staff.

SURG 5619. AI: GI/Lap Surgery. The AI rotation of the GI/Lap service will expose the student to a broad variety of general surgical and advanced laparoscopic procedures. The student will be integrated into the four resident teams and will be expected to fully participate in activities-patient rounds, duties in the operating room, and all educational conferences. If desired, the student can choose to focus their clinic or OR time on a subset of the practice such as bariatric surgery, laparoscopic foregut surgery, or advanced endoscopic procedures and the faculty who perform them.

SURG 5620. ACE: Neurological Surgery. Neurosurgery is a fast-paced, challenging field dedicated to the comprehensive treatment of critically ill patients with neurologic diseases. It is an incredibly diverse specialty, incorporating treatment of children and adults suffering from CNS tumors, cerebrovascular disease, movement disorders, spine disorders, peripheral nerve diseases, and trauma. Each student will spend their 4 weeks rotating through the 4 different neurosurgical services to gain a broad exposure to the field. Students will take part in the care of inpatients, the workup of consults, and the technical aspects of a variety of bedside and operative procedures. They will also attend several outpatient clinics and take overnight call with the junior resident on a Q4 schedule. Students will participate in career development sessions designed to prepare them for the residency application process and will give several short presentations to the clinical teams and the department throughout the rotation.

SURG 5621. ACE: Post-Surgical Critical Care. This ACE will expose medical students to care of a broad range of postoperative surgical critical care patients, including cardiothoracic, neurosurgical, otolaryngical, orthopedic, vascular, and general surgical patients. This course fulfills the acute care requirement.

SURG 5622. ACE: Ophthalmology II. Ophthalmology is a wonderful specialty, combining both medical and surgical care of the eye and the periorcular structures. The ACE will allow medical students to participate in care delivered at the Vanderbilt Eye Institute, the Nashville Veterans Affairs Hospital and the Vanderbilt University Hospital’s inpatient and emergency room. Through shadowing attendings and performing ophthalmic exams, it is expected at the conclusion of the ACE a medical student will be able to (1) perform a basic ocular history (2) perform a basic slit-lamp examination and dilated fundus examination with a direct ophthalmoscope, (3) have a working understanding of the major etiologies of vision loss in the United States, including cataracts, glaucoma, age-related macular degeneration, diabetic retinopathy and amblyopia, and (4) accurately diagnose common ophthalmic issues, including corneal abrasions, tearing, conjunctivitis, superficial foreign body, ptosis and (5) accurately diagnose ophthalmic emergencies such as chemical burns, acute-angle closure glaucoma, central retinal artery occlusions, and various ocular traumas. Students will also be able to identify those ophthalmologic conditions that require consultation and referral. Additionally, the societal impact of loss of vision on a person’s activities of daily living, the readjustment of independence following restoration of sight and the evolving role of the ophthalmologist providing this care should be appreciated by the medical student.

SURG 5623. ACE: General Surgery, STH. General and Vascular Surgery require broad diagnostic and patient care skills, in additional to technical expertise. The student pursuing any surgical specialty should have ample experience managing the wide spectrum of surgical pathology and comorbid conditions seen on a tertiary surgical service. This course offers additional exposure to pathology in disease processes ranging from sepsis, respiratory failure, renal failure, wound issues, as well as end of life and palliative care. Students will have the opportunity to work with multiple attending preceptors and be a part of surgical resident teams, as well as participate in general surgery and multidisciplinary vascular and surgical oncology conferences. The course will focus on enhancing student
clinical practice-based learning skills. Students will have the opportunity to scrub on a wide variety of operations and take overnight call with experienced surgical residents, exposing them to the intricacies of patient care on one on one basis. Students will be expected to stay for overnight call at least four times during the four-week rotation.

SURG 5625. ACE: Otolaryngology. The Otolaryngology ACE is a surgical and medical course that offers immersion into the oldest medical specialty in the United States. This course deals with disorders of the ear, nose, and throat and involves the Head and Neck/Laryngology, Pediatric Otolaryngology, Rhinology/Plastic Surgery, and Otolaryngology services. Rotations provide the clinical complexity of various head and neck pathologies and explores medical and surgical treatment plans. The course will focus on the diagnosis, treatment, and management of many specialty specific disorders as well as primary care problems associated with pediatric and adult patients in the ambulatory, inpatient and operating room setting. Rotators will encounter disorders including ear disease and hearing loss, head and neck cancer, voice and communication disorders, obstructive sleep apnea, and airway abnormalities. The outpatient setting will enhance and reinforce a thorough head and neck examination, including the ear exam, and foster development of an Otolaryngologic assessment and plan. Additionally, students will be able to be involved with the inpatient otolaryngology team and in and observe operating room procedures. Students will have a unique look into the complexities of this specialty and become involved with the multi-disciplinary approaches to treatment with other team members including: audiologists, speech pathologists, radiologists, pulmonary and gastroenterology physicians.

SURG 5628. AI: Hepatobiliary. The hepatobiliary and liver transplant surgery rotation includes the full spectrum of benign and malignant disease of the liver, pancreas and bile ducts. This service allows exposure for rotating students to complex hepatobiliary anatomy and pathophysiology, including liver failure. Unique to this rotation is the opportunity to participate in organ procurements, a very popular operation amongst surgical students. Abdominal organ procurement offers unparalleled anatomic exposure to the abdomen and pelvis. Rotating students will participate directly in these operations and they have the right of first refusal on each procurement. As there is ample opportunity to see these operations, a waiting list is compiled for other students to travel for these operations, which are often off site. Students will have the opportunity to function as an integral member within the surgical resident clinical teams, as well as attend weekly clinics and teaching conferences, including Hepatobiliary Conference, Liver Transplant Selection Committee and Liver Team Walk Rounds. The course will focus on enhancing student clinical practice-based learning skills. Students will have the opportunity to (1) deepen their understanding of the complex anatomy and pathophysiology of the liver, (2) learn the basic principles of multidisciplinary management of liver failure, (3) review the differential diagnoses and therapeutic strategies for the liver, and (4) understand the numerous complications seen after hepatobiliary and liver transplant procedures. Additionally, students will not be expected to stay for overnight call on a rotating schedule. However, given the emergency nature of procurements and transplants, after hour effort is common, as dictated by the on-call attending and resident staff. As additionally participate in the service much as PGY1 interns do with the exception that they are closely supervised for order writing and procedures. They are also given priority for elective cases and procurements over students in the ACE. However, since interns on this rotation do not often go to the OR for elective cases and this course as an acting internship is designed to empower the student to act as an intern on the service, operative experience is a secondary objective.

SURG 5630. ACE: Cardiac Surgery. The cardiac surgical service deals with congenital and acquired heart disease, pulmonary vascular disease, and anomalies of the arterial and venous systems in the chest in both pediatric and adult patients. Students will have the opportunity to evaluate patients in the clinic with complex cardiovascular, and cardiac lesions and understand their anatomy and physiology. They will be introduced to cardiac ECHO, cardiac MRI, CT scans of the chest, and cardiac catheterization by the attending surgeon. They will follow the patient to the operating room where they will participate in the surgical repair and to the CVICU and step-down unit for postoperative care. In the CVICU the student will be introduced to the evaluation of hemodynamic parameters; use of vasopressors, dilators and antiarrhythmics; postoperative pacing, ECHO and ventilator management. During the four-week course the student may get the opportunity to participate in an aortic dissection repair, ventricular assist device insertion, cardiac transplant, or organ retrieval.

SURG 5632. ACE: Thoracic Surgery. The Vanderbilt Thoracic Surgery Advanced Clinical Experience will introduce the student to general thoracic surgery including preoperative workup, basic thoracic surgery operative skills, and postoperative care. This rotation will teach basic thoracic surgical and endoscopic techniques. The student will learn how to recognize and care for thoracic surgery patients, including placement of chest tubes, drainage of effusion, endoscopy, and participate in various thoracic surgery operations.

SURG 5660. ACE: Pediatric Surgery. The Pediatric Surgery Advanced Clinical Experience will allow students to hone their clinical skills in accurate history taking, clinical assessment of children, developing an appropriate differential diagnosis and potential plan. Students will participate in the operative management of these same patients and follow their post-operative progress until discharge. Students will have the opportunity to (1) improve their knowledge of the common pathologies encountered in a pediatric surgical practice, (2) broaden their understanding of the surgical management of these problems, and (3) gain first-hand experience with the depth and breadth of a clinically busy pediatric surgical service. During the rotation students will spend time with the team in clinic at least once per week, in the operating rooms, on the wards with the interns and physician extenders and seeing new consults with the team. Additionally, ACE students will be expected to stay for overnight call at least 3 times during a 4-week rotation with at least 1 day over a weekend.

SURG 5665. AI: Pediatric Surgery. The Pediatric Surgery Acting Internship will focus on honing the students’ clinical skills in accurate history taking, clinical assessment of both acute and chronically ill neonates and children, developing an appropriate operative (or non-operative) plan, participation in the operative management of these patients and following their post-operative progress until discharge. The AI student will have the opportunity to (1) improve their knowledge of the common and uncommon pathologies encountered in a pediatric surgical practice, (2) broaden their understanding of the operative and non-operative management of these problems, (3) gain first-hand experience with the depth and breadth of a clinically busy pediatric surgical service and (4) mentor younger students. During the rotation students will spend time with the team in clinic, in the operating rooms, on the wards and seeing new consults on their own. Additionally, AI students will be expected to stay for overnight call at least 4 times during a 4-week rotation with at least 2 over a weekend.

SURG 5670. ACE: Surgical Oncology. The Advanced Clinical Experience (ACE) in Surgical Oncology offers students a broad and detailed clinical week in the treatment of malignancies. Emphasis will be on the multidisciplinary management of a variety of malignancies including those of the liver and biliary tract, pancreas, gastrointestinal tract, retroperitoneum, breast, skin and soft tissue and endocrine systems. Students will be active participants both in the inpatient (including the operating room and floor) and outpatient settings and participate in several educational conferences including multidisciplinary tumor board, surgical oncology conferences and others and Vanderbilt University Hospital. Students will be expected to take overnight call four times during the four-week rotation.

SURG 5675. AI: Surgical Oncology. The Acting Internship (AI) in Surgical Oncology provides students with a broad but detailed clinical experience in the diagnosis and treatment of solid organ malignancies. Emphasis will be on the multidisciplinary management of a variety of malignancies including those of the liver and biliary tract, pancreas, gastrointestinal tract, retroperitoneum, breast, skin and soft tissue and endocrine systems. Students will be active participants both in the inpatient (including the operating room and floor) and outpatient settings and participate in several educational conferences including multidisciplinary tumor board, surgical oncology conferences and others and Vanderbilt University Hospital. Students will be expected to take overnight call four times during the four-week rotation. Highlights of the AI experience in Surgical Oncology will include increased responsibility with the goal of preparing the student for surgical internship, including being primarily responsible for their own patients, answering pages, writing orders under the supervision of residents, working up and
presenting patients both in the inpatient and outpatient setting, and taking call which will include cross-covering of other services.

**SURG 5680. ACE: Plastic Surgery.** Plastic surgery is a broad field with subspecialties that include craniofacial, microsurgery, hand, breast reconstruction, burn, and aesthetics. Plastic surgeons treat patients of all ages and work on almost every part of the body from head to toe. During this advance clinical experience, you will have the opportunity to learn about the diagnosis and management of a wide variety of reconstructive and aesthetic problems. Learning opportunities with faculty and residents are abundant and you will gain plenty of experience in both the operating room and the clinics.

**SURG 5700. ACE: Oral and Maxillofacial Surgery.** Oral and maxillofacial surgery is the clinical discipline that focuses on the management of diseases, deformities, injuries, and defects of the oral and facial structures. With elements of dentistry, medicine, anesthesia, and surgery, the ACE provides exposure to a wide array of clinical conditions ranging from lesions and conditions of the oral cavity, odontogenic head and neck infections, cleft palate, oral/facial reconstruction, total temporomandibular joint replacement, complex facial fractures to congenital and acquired deformities of the jaws and facial bones. Students will be active participants in clinical and didactic activities. Practice-based learning and systems-based practice methods will be emphasized. Students will have the opportunity to (1) enhance their fund of knowledge in clinically relevant overlapping areas of dentistry/oral surgery and medicine, (2) improve their working understanding of head and neck anatomy, (3) review common infections of the oral and head and neck region, (4) learn fundamental principles of head and neck reconstruction, and (5) participate in the delivery of clinic-based ambulatory anesthesia. Students will be expected to take facial trauma call.

**SURG 5701. AI: Oral and Maxillofacial Surgery.** This Acting Internship focuses on the management of diseases, deformities, injuries, and defects of the oral and facial structures. With elements of dentistry, medicine, anesthesia, and surgery, the AI provides exposure to a wide array of clinical conditions ranging from lesions and conditions of the oral cavity, odontogenic head and neck infections, cleft palate, oral/facial reconstruction, total temporomandibular joint replacement, complex facial fractures to congenital and acquired deformities of the jaws and facial bones. Students will be active participants in clinical and didactic activities. Practice-based learning and systems-based practice methods will be emphasized. Students will have the opportunity to (1) enhance their fund of knowledge in diseases, injuries, and congenital and acquired deformities of the oral and maxillofacial regions, (2) improve their working understanding of head and neck anatomy, (3) review common infections of the oral and head and neck region and principles of surgical and pharmacologic infection management, (4) learn fundamental principles of head and neck reconstruction, (5) apply principles of facial trauma patient evaluation and facial fracture management, (6) participate in the delivery of comprehensive ambulatory oral surgical services, and (7) participate in the delivery of clinic-based ambulatory anesthesia and in the management of simulated anesthetic emergencies. Students will be expected to take facial trauma call. For students in the Oral Surgery Residency program only.

**SURG 5840. ACE: Trauma.** The trauma ACE allows students to follow injured patients from the moment they arrive until discharge. This includes management in all settings, ICU, floor, clinic and the option of time in the comprehensive traumatic brain injury clinic. Students will be introduced to high-level procedure-based situations including central venous access, tube thoracostomies, bronchoscopy, advanced suturing techniques and operative management of the trauma patient. Expectations will focus on the complex management of patients including coordination of care with other subspecialties, identifying and managing critical care issues such as ventilator management, massive resuscitation efforts, complexities of organ failure and sepsis, end-of-life decisions and organ donation. Opportunities for both day and night coverage will allow the student to obtain a complete understanding of the field of trauma (the #1 cause of death for all patients age 1-45). This course fulfills the acute care requirement.

**SURG 5850. AI: Trauma.** The trauma AI allows students to follow injured patients from the moment they arrive until discharge. This includes management in all settings, ICU, floor, clinic and the option of time in the comprehensive traumatic brain injury clinic. Students will be introduced to high-level procedure-based situations including central venous access, tube thoracostomies, bronchoscopy, advanced suturing techniques and operative management of the trauma patient. Expectations will focus on the complex management of patients including coordination of care with other subspecialties, identifying and managing critical care issues such as ventilator management, massive resuscitation efforts, complexities of organ failure and sepsis, end-of-life decisions and organ donation. Opportunities for both day and night coverage will allow the student to obtain a complete understanding of the field of trauma (the #1 cause of death for all patients age 1-45). This course fulfills the acute care requirement.

**SURG 5930. AE: Preparation for Surgical Internship.** The goal of this course is to arm fourth year medical students entering a surgical specialty with the skills and understanding needed to hit the wards as a resident. The curriculum for the course has been developed by the American College of Surgeons in conjunction with the Association for Surgical Education and Association of Program Directors in Surgery. These activities and sessions include mock pages, bedside procedures, operative anatomy using cadaveric dissections, basic open and laparoscopic skills, airway management and simulation scenarios, and will be led by some of Vanderbilt’s best clinical teachers. At the end of the course, students should feel prepared to enter a surgical internship and understand their own strengths and weaknesses as they prepare for surgical training.

**SURG 6100. Special Clinical Study-Vanderbilt.** Each student arranges an independent study with a mentor and completes a period of clinical work. Approval required.

**SURG 7100. AWAY ACE: Surgery.** Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

**SURG 7150. Special Research Study-Non-VU.** Each student arranges an independent study with a mentor and completes a period of research work away from Vanderbilt. Approval required.

**Urologic Surgery**

**UROL 5310. Reconstructive Urology.** Students will join a team of attendings, fellows, and residents on the Reconstructive Urology service at Vanderbilt Hospital and Cool Springs Surgery Center. Students will participate in the operating room, clinics, outpatient procedures, didactics, and inpatient management for the Reconstructive Urology service. Common issues encountered and treated on this service include incontinence, urethral stricture disease, erectile dysfunction, Peyronie’s disease, voiding dysfunction, pelvic organ prolapse, and neurogenic bladder. At the conclusion of the two-week elective rotation, students will be able to take a focused urologic history and physical, understand the basics of evaluation and management of Reconstructive Urology issues, and appreciate the medical and surgical modalities utilized to diagnose and treat these patients. Additionally, the students will gain a familiarity with the use of evidence-based medicine as it applies to Reconstructive Urology.

**UROL 5640. ACE: Urology.** This ACE will encompass the care of the surgery patients admitted to the Urology service. The student will be expected to function as a member of the team at a supervised level for patient management and communication with other health care providers. This will include preparing the admission history and physical examination, entering orders, writing daily progress notes, presenting patients on daily work rounds, participating in surgical procedures, and coordinating discharge planning. Students will be additionally given opportunity for outpatient experiences in the clinics. Students will be expected to participate in select weekend rounds and assist with triage of consults for the inpatient service.

**UROL 6100. Special Clinical Study: Urology, VU.** Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.

**UROL 7100. AWAY ACE: Urology.** Each student arranges an independent study with a mentor and completes a period of clinical work away from Vanderbilt. Approval required.
Clinical Investigation

Courses leading to the Master of Science in Clinical Investigation

MSCI 5000. Drug and Device Development. This seminar styled course is designed to provide an overview of the drug and device development process and will include issues of drug discovery, pre-clinical drug development, Phase I through IV human testing, device development and the role of the FDA in regulatory affairs. Learning objectives will include: 1. To provide an overview of the drug development process from initial compound discovery, through clinical trials, to post-marketing issues; 2. To provide an overview of device development, and to contrast this to the process of drug development; 3. To provide some insight into the function of the Food & Drug Administration (FDA); 4. To discuss topical issues related to drugs, devices, and the FDA by using current events in the news. [3]

MSCI 5001. Grant Writing. [Also listed as PUBH 5517] This course provides a foundation in grant writing for the early career scientist. Core topics include an overview of funding agencies and award mechanisms, as well as how to identify funding opportunities, plan an application, construct an impactful research plan, develop a budget, and succeed at grantsmanship. Optional sessions discuss career development awards, research mentorship, VUMC institutional awards and resources, VA grants, NIH biosketch development, and training in the responsible conduct of research. Students will also learn how grants are reviewed and scored, complete a grant review, and participate in a mock study section. [1]

MSCI 5002. Medical Writing for Clinical Investigators. This course is designed to teach clinical investigators medical writing skills required to publish scientific articles in a peer-reviewed medical journal. Since trainees in the MSCI program are expected to complete their master’s thesis based on their research project in the spring of year 2, this course is scheduled prior to this deadline to assist students in writing their thesis/paper. Teaching will consist of demonstrations and discussions of how to improve the writing quality using each student’s thesis-in-progress as an example. Students will be expected to write and revise their master’s thesis as course-work, no additional written assignments will be required. [2]

MSCI 5003. Genetics, Genomics, and Molecular Medicine. The main goal of this course is to provide an up to date perspective in genetics as it applies to clinical practice and medical research and thus to enhance knowledge and skills in this rapidly evolving field. This course is designed to give physician and life-scientist trainees an overview of genomic medicine and how best to utilize it in both clinical practice and research projects. The course will introduce students to key concepts in genetics and how these concepts affect genomic data interpretation and study design. Students will learn about a number of approaches that can be used to biologically test these data. The course format will be a mix of interconnected lectures, hands-on workshops, supplemented by online training modules. [4]

MSCI 5005. Case Studies in Clinical Investigation I. The Case Studies I course is designed to utilize a studio process to enrich trainee research. Studios are structured, dynamic sessions which bring together relevant research experts with the purpose of enhancing research quality, improving funding success, fostering advances in clinical practice and improvements in patient health, increasing publications and generating new hypotheses. Participants include 2-6 experienced faculty, your mentor, your MSCI peers, and the MSCI program directors. You choose the most appropriate studio depending on the stage of your research: hypothesis generation, aims, study design, implementation, analysis and interpretation, translation, manuscript development, or grant development. Presentations should be conducted as if presenting at a research conference. Attendance at peers’ studios is expected as it will foster critical thinking from an interdisciplinary approach, collegiality, and collaboration. [1]

MSCI 5009. Biostatistics I. This course will teach practical, modern biostatistical skills and help the student to become multilingual regarding statistical software. Students will use several statistical software packages to learn data analysis methods for reproducible research using actual clinical research data sets. Students will also learn about statistical power and sample size calculations using the software PS and nQuery Advisor. An emphasis will be placed on performing statistical analyses and interpreting output. Commonly used statistical methods will be explained as well as the techniques that experienced biostatisticians use to analyze data. [4]

MSCI 5015. Biostatistics II. The primary focus of Biostatistics II is the multivariable regression model which is the fundamental tool that researchers use for prediction, effect estimation, and hypothesis testing. This course covers the most commonly used regression models (linear, logistic, ordinal, time-to-event, and serial) plus general methods applicable to all regression models such as restricted cubic splines, bootstrapping, multiple imputation for missing data, model diagnostics, and validation. There is an emphasis on aspects related to clinical and translational study design.

MSCI 5016. Research Skills. This course offers basic instruction and practical advice on a variety of issues and skills related to the conduct of clinical research, often with computer demonstrations. First or second year. Fall, Spring. [1]

MSCI 5017. Clinical Scientist Career Seminars. This seminar series, conducted in conjunction with the office of Clinical and Translational Scientist Development, features two pathways based on the trainee’s current career stage: Translational Bridge—Post-doctoral MD and PhD investigators completing training and establishing careers in clinical and translational research; Newman Society—Junior faculty members pursuing a career as a physician-scientist or as a clinical educator with significant clinical research involvement. Topics of discussion will include academic rules of the road; time management, promotion/tenure issues, publication compliance, independence, scientific branding, grants management, and overall program evaluation. Trainees will also submit a poster abstract to the annual Clinical and Translational Research Forum hosted in the fall. The seminars occur throughout the MSCI matriculation. [1]

MSCI 5021. Master’s Research I. Trainees will participate in this course throughout the first and second years of the MSCI program. The Master’s Research course, along with the Case Studies series, is designed to guide trainees to the successful completion of the master’s final project. All trainees are required to spend a minimum of 80 percent time in research activities, which include didactic course work and activities within the mentor’s lab. [1]

MSCI 5022. Master’s Research II. Trainees will participate in this course throughout the first and second years of the MSCI program. The Master’s Research course, along with the Case Studies series, is designed to guide trainees to the successful completion of the master’s final project. All trainees are required to spend a minimum of 80 percent time in research activities, which include didactic course work and activities within the mentor’s lab. [3]

MSCI 5023. Master’s Research III. Trainees will participate in this course throughout the first and second years of the MSCI program. The Master’s Research course, along with the Case Studies series, is designed to guide trainees to the successful completion of the master’s final project. All trainees are required to spend a minimum of 80 percent time in research activities, which include didactic course work and activities within the mentor’s lab. [3]

MSCI 5024. Case Studies in Clinical Investigation II. The Case Studies II course provides an opportunity to present and discuss the progress and results of the trainees’ primary MSCI project. In accomplishing this goal, the course utilizes a studio process and/or presentation format. You choose the most appropriate format depending on the stage of your research: presentation, manuscript studio, data analysis studio, or grant review studio. Studios will be conducted in the same manner as in Case Studies I. Presentations should be conducted as if presenting at a research conference. Attendance at peers’ studios is expected as it will foster critical thinking from an interdisciplinary approach, collegiality, and collaboration. [1]

MSCI 5025. Research Extension. This course allows for an extension on the research project. [0]

MSCI 5028. Data Management. This course is designed to teach important concepts related to research data planning, collection, storage and dissemination. Instructional material will cover best-practice guidelines for 1) investigator-initiated and sponsored research studies, 2) single- and multi-center studies, and 3) prospective data collection and secondary-
Three common problems with BioVU study design and how to address them, dealing with race in BioVU, IRB approval procedures and other RCR topics, and the BioVU application process. Students will have access to a test set of 1000 BioVU participants in order to gain practical experience in extracting useful research data from the SD. The course will be M-Tu-F 12-1 in Light Hall. Two hours per week will be lecture/discussion and one hour will be practicum involving hands-on experience with BioVU. Students are expected to develop their own BioVU proposal during this course. [Spring][3]

MSCI 5099. Independent Study. Students may choose a topic for independent study. This course is graded pass/fail. [1-5]

Audiology

Courses leading to the Doctor of Audiology

AUD 5216. Introduction to Billing and Coding for Audiology Services. This course is an overview of coding and compliance requirements for billing in an audiology practice. Topics include: managed care terms, insurance contracting, billing terminology, Medicare, Medicaid, CPT, ICD 9, ICD 10, HCPCS, and modifiers. Spring. [1]

AUD 5227. Anatomy and Physiology of Hearing Mechanisms. A comprehensive description of the anatomy and physiology of the peripheral and central auditory systems in normal and impaired populations. Includes a clinically oriented review of neuroanatomy focused on the major sensory and motor pathways. Fall. [3]

AUD 5233. Neuroscience. A comprehensive introduction to the field of neuroscience from important molecules to cell function, neural systems, and cognition. Topics include the physiology of nerve cells, the sensory systems of vision, audition and touch, the motor system, sleep, consciousness, speech, and sexual behavior. Coverage of clinical topics includes the chemical basis of the psychoses, diseases of the brain, and repair mechanisms after brain injury. Spring. [3]

AUD 5303. Big Data in Biomedical Research. I. Design and Conduct—The theoretical and practical challenges to be considered in designing and conducting a high-dimensional experiment including Next Generation Sequencing (NGS), Genome-Wide Association Study (GWAS), microRNA (miRNA), etc., will be presented. Topics to be discussed include the specification of a primary objective, quality control and pre-processing guidelines, the role of repeatability & reproducibility studies and the means for their implementation, the type and assessment of sources of variance, the choice of design strategy and design strengthening features, and the considerations involved in sample size determination and number of replications of the same sample. II. Analysis of High-dimensional Experiments—Methods of analysis appropriate to various study objectives, class comparison, and class prediction will be presented. The statistical and bioinformatic approach will be based on empirical use of methodologies rather than formal algebraic knowledge, the emphasis on understanding what the procedures do and applications to big data analysis. Methods of data quality control evaluation and various visualization tools will be discussed. Summer. [1]

MSCI 5044. Clinical Trials. This course will cover design and data analysis for clinical trials in biomedical research. Primary topics include specification of study objectives, design options, ethical guidelines, randomization, blinding, sample size determination and power analysis, interim monitoring and data analysis appropriate for parallel, crossover, nested, factorial and group allocation designs. Other topics include role of FDA in the drug approval process, adaptive trial designs, non-inferiority trials and bio-equivalence trials. Emphasis is on practical use of methods rather than formal statistical theory. [3]

MSCI 5091. BioVu Study Design. This is a practical course designed to prepare students to conduct research using the de-identified version of Vanderbilt’s electronic medical record (Synthetic Derivative, SD) and DNA biorepository (BioVU). After completion of this course students will have the skills to independently execute SD/BioVU projects and assist others who wish to utilize the resource. Through lectures, demonstrations, and hands-on workshops, students will develop competence in all aspects of the BioVU research process, including project design, data extraction and cleaning, and analysis. Students will also become familiar with practical aspects of using BioVU, including administrative/regulatory requirements and basic use of bioinformatics tools. Topics covered will include: overview of the clinical data available in the Synthetic Derivative (SD), techniques for defining phenotypes within the SD, working with the BioVU programmers, proper control definition, limitations of BioVU for research, available genetic data, common problems with BioVU study design and how to address them, dealing with race in BioVU, IRB approval procedures and other RCR topics, and the BioVU application process. Students will have access to a test set of 1000 BioVU participants in order to gain practical experience in extracting useful research data from the SD. The course will be M-Tu-F 12-1 in Light Hall. Two hours per week will be lecture/discussion and one hour will be practicum involving hands-on experience with BioVU. Students are expected to develop their own BioVU proposal during this course. [Spring][3]

MSCI 5099. Independent Study. Students may choose a topic for independent study. This course is graded pass/fail. [1-5]
AUD 5332. Pathology of the Auditory System. A study of pathologies involving the peripheral auditory system arising from genetic factors, disease, and trauma, with emphasis applied to presenting signs/symptoms, and medical/audiological management. Fall. [3]

AUD 5337. Auditory Clinical Electrophysiology. This course will cover basic concepts in electrophysiological and electromagnetic recordings (e.g., electrode types/uses, far and near field recordings, volume conduction, dipole sources). Recording of both near and far-field electrical responses emitted by peripheral and central nervous system will be studied. Recording techniques and interpretation of conventional clinical evoked potentials (e.g., electrocochleography, auditory brainstem response, somotor responses, electroneurography) will be covered. Special topics will include: audiometric applications of these evoked potentials (e.g., for infant hearing screening and special needs populations, and intraoperative neurophysiological monitoring). There will be extensive laboratory practica conducted within and outside the classroom. Spring. [3]


AUD 5340. Lab: Amplification I. Laboratory that stresses instruction and practice in basic hearing aid techniques including Otoscopic examination, ear impressions, electroacoustic evaluation and probe microphone techniques. Co-requisite: AUD 5339. Spring. [1]

AUD 5345. Amplification II. Advanced topics in amplification including advanced probe microphone techniques, single and multi-channel compression systems, analog and digital signal processing, and current and emerging prescriptive and fitting verification methods. Fall. [3]

AUD 5346. Vestibular Sciences I. This course offers an in-depth approach to the basic assessment of the dizzy patient. Subject matter will include: where the vestibular system assessment falls in the audiology scope of practice, detailed anatomy and physiology of the peripheral and central vestibular, ocular motor, and postural control systems; bedside testing, introduction to both electrical and video techniques for recording the vestibulococular reflex; case history and bedside assessment of the dizzy patient, and the technique and interpretation of video and electro-nystagmography. Students will be expected to conduct practica outside the classroom. Fall. [3]

AUD 5347. Vestibular Sciences II. This course will focus on the description of advanced assessment techniques including whole body, yaw axis sinusoidal harmonic acceleration testing and step testing, and techniques for the assessment of the otolith system including on and off-axis centrifugation, and both cervical and ocular vestibular evoked myogenic potentials. A module will be taught on the topic of peripheral and central disease and disorders affecting the vestibular system. Embedded in this module will be a section describing the multidimensional assessment of falls risk, disequilibrium of aging and the medical/surgical and non-medical management (i.e., vestibular rehabilitation) of vestibular system impairments. A final module will focus on how results of the vestibular test battery form predictable patterns. Students will be expected to conduct practica outside the classroom. Prerequisite: successful completion of Vestibular Sciences I. Summer. [3]

AUD 5350. Vestibular Sciences III: Sensory and Motor Control of Posture. This course will cover the neural mechanisms of postural control. Multisensory integration and biomechanics that contribute to static and dynamic posture will be explored. Normal and abnormal development, aging, and learning will be presented. The effects of pathology on postural control will be discussed. Technology including computerized dynamic posturography will be used to demonstrate concepts. Prerequisite: Successful completion of Vestibular Sciences I and II, or permission from the instructor. Fall. [2]


AUD 5354. Cochlear Implants. This course covers basic principles of electrical stimulation of neural tissue, cochlear implant design, as well as the history of cochlear implants. Further it will cover current issues in the medical, audiological, speech/language, and educational management of adults and children with cochlear implants – emphasis on multidisciplinary team function. Prerequisite: AUD 5318. Spring. [3]

AUD 5355. Clinical Externship. Graded pass/fail. Fall. [3], Spring [3], Summer [1]. [1-3]

AUD 5359. Audiometric Instrumentation and Calibration. An introduction to fundamental concepts in electronics and computer science and to instrumentation used in the hearing clinic or research laboratory for producing, measuring, and analyzing audio signals. Standards and procedures for calibration measurements, with practical hands-on experience. Fall. [3]

AUD 5361. Family-Centered Counseling and Interviewing. Examines the helping relationship in the clinical process, counseling theory relative to audiology practices, and principles and methods of effective clinical interviewing and counseling. Summer. [2]

AUD 5363. Hearing and Aging. A survey of major concepts in gerontology, including demographics, psychosocial aspects of aging, biology of aging, and clinical conditions of the older adult. Physiological changes within the aging auditory system, and clinical issues in audiological assessment and intervention with older hearing-impaired patients. Fall. [3]

AUD 5365. Business and Financial Management. An overview of accounting practices, marketing, and operations management as they relate to management of an audiology practice. Topics discussed include financial reporting, budgeting, pricing, billing and coding, regulatory issues, and human resource management. Students are required to design an audiology practice and develop a business plan as part of this course. Spring. [3]

AUD 5367. Professional Issues and Ethics for Audiologists. Examines professional issues in audiology including malpractice, quality improvement, marketing, credentialing, diversity, and legislation. Emphasis will be given to issues of ethics and clinical integrity in the practice of the profession of audiology. Fall. [2]


AUD 5369. T35 Research Course. This course is part of the NIH-NIDCD T35 Research Traineeship Program in the Department of Hearing and Speech Sciences. This course will encompass the research traineeship activities in individual laboratories, lectures, and group discussions related to rigor and reproducibility in science, responsible conduct in research, and key issues important to research career and practices. Students will present and lead a journal discussion relevant to the research they are working on in their respective laboratories, report on research activities, and participate in research discussions. Summer. [6]

AUD 5374. Overview of Intraoperative Monitoring. A basic introduction to intraoperative neurophysiologic monitoring, including observation time in the operating room. May Session [1]

AUD 5580. Introduction to Clinical Case Conference. This course introduces students to the weekly case conference where clinical case studies will be presented. Fall. [1]

AUD 5581. Capstone I. Capstone projects may take several forms including research-based investigations, evidence-based position papers, business plans, critical literature reviews with applications to clinical problem solving, grant proposals, development of clinical protocols based on published research findings, etc. In Capstone I, students will identify an appropriate capstone committee and define their capstone projects and submit and defend a capstone proposal. Fall, Spring, Summer. [3]
AUD 5582. Capstone II. In Capstone II, students will complete their capstone project. The capstone project culminates in an oral defense of a formal manuscript which has been submitted to the student’s capstone committee. Fall, Spring, Summer. [3]

AUD 5583. Practicum and Clinical Case Conference. This course includes attendance at weekly case conferences where clinical case studies will be presented. The grade for this class will include clinical performance and attendance. Fall, Spring. [3]

AUD 5584. Independent Practicum. This course allows students to continue work toward degree requirements. Fall, Spring, Summer. [6]

AUD 5586. Summer Practicum. This course includes attendance at weekly case conferences where clinical case studies will be presented. The grade for this class will include clinical performance and attendance. Summer. [3]

Education of the Deaf

Courses leading to the Master of Education of the Deaf

MDE 5207. American Sign Language I. This introductory course includes basic communication skills of American Sign Language and “contact” language (e.g., nonmanual markers, fingerspelling, numbers, basic vocabulary, classifiers), the sign system continuum, culture implications, and media resources available. Open to all Hearing and Speech Science students. Requires faculty approval. Fall only. [3]

MDE 5208. American Sign Language II. This is an intermediate course in American Sign Language that includes an in-depth look at the linguistics of ASL (e.g., morphology, syntax, phonology, and semantics) and current readings and research in the field. Prerequisite: one 3-credit, college level course in ASL. Requires faculty approval. Spring. [3]

MDE 5306. Language and Literacy in Children with Hearing Loss. This course presents an overview of normal language acquisition and the challenges imposed by a hearing loss. A variety of methods and materials to develop oral and written language and reading will be included. Practical methods of assessment, supportive strategy development, and curricular adaptations for children with hearing loss will be explored. Summer. [3]

MDE 5312. Psychology and Culture of the Deaf. Presentation and discussion of significant historical and current issues relating to the deaf population. Primary focus will be on psychological development, educational/methodological models, and deaf culture. Although the principal focus is on the psycho/social and cognitive/intellectual development of deaf individuals through the lifespan, a general survey of other areas of exceptionality is made with emphasis on the implications for the deaf child with additional disabilities and/or special needs. Spring. [2]

MDE 5320. Introduction to Amplification for Infants and Children. Designed for deaf education and speech-language pathology students. Current issues and trends in conventional amplification for infants and children. Selection, fitting, verification, and validation of traditional amplification options will be addressed including directional vs. omnidirectional microphones, analogue vs. digital instruments, monaural vs. bilateral fittings, and real-ear measures vs. functional aided gain. Hearing aid retention, maintenance, and troubleshooting techniques are addressed. Fall. [1-2]

MDE 5322. Children with Hearing Loss & Additional Disabilities. A survey of methods, procedures, and observational techniques used in the identification and evaluation of children with physical, cognitive, and/or emotional disabilities. An interdisciplinary perspective informs the course with particular attention to identifying characteristics of special populations that are atypical of children with hearing loss. Summer. [3]

MDE 5354. Cochlear Implants. This course covers basic principles of electrical stimulation of neural tissue, cochlear implant design, as well as the history of cochlear implants. Further it will cover current issues in the medical, audiological, speech/language, and educational management of adults and children with cochlear implants—emphasis on multidisciplinary team function. Prerequisite: AUD 5318. Spring. [2]

MDE 5356. Internship/Externship: MDE/Specialty Track. A three-week, intensive, full-time clinical or classroom placement during the month of May in an auditory/oral environment designed specifically to meet the student’s individual interests and needs. Summer, Spring. [2]

MDE 5358. Field Experience in Deaf Education. Students will develop appropriate skills for providing services to children with hearing loss in group settings; will collaborate with professionals in audiology and speech/language pathology; will plan sessions for family-centered intervention emphasizing communication development or plans lessons; will prepare or review individual family service plans (IFSPs) or individual education plans (IEPs); will assess speech, language, listening, cognitive, motor, and social development of children; and will evaluate effectiveness of services. Fall, Spring [3], Summer [2]

MDE 5372. Seminar in Deaf Education. Supports student development of organizational skills that will facilitate the completion of requirements for the master’s degree in education of the deaf and the transition from graduate school to a profession in deaf education. Emphasis is placed on the development of a professional portfolio, a review of certification requirements, and skill development in job searching including resume writing and interviewing skills. Spring. [3]

MDE 5390. Curriculum and Methods for Deaf Children. Presentation and discussion of current issues, methods, and materials involved in providing successful educational programming for children with hearing loss both in special programs and in inclusive settings. This includes the adaptation of regular curriculum and instructional procedures for students with hearing impairments. Focus is on assessment of academic skills and individualizing instruction. Students gain practical experience in planning, carrying out, and evaluating lessons and are exposed to a variety of educational materials and methods. Spring. [3]

MDE 5392. Teaching Children with Hearing Loss to Listen and Speak: Early Childhood Development. Theories of and methods for developing auditory perception and spoken language skills in deaf and hard-of-hearing children. The purpose of this course is to increase students’ skills in assessing and developing speech, auditory functioning, and phonological awareness in deaf and hard-of-hearing children in early childhood development. Fall. [2]

MDE 5393. Educational Assessment for Children with Hearing Loss. The purpose of this course is to introduce students to effective assessment tools and strategies specifically for children with hearing loss. Students will become familiar with state testing protocols, and accommodations and modifications necessary for student success, 2 credit hours, Spring.

MDE 5394. Educational Programming and Service Delivery for Children with Hearing Loss. The course will include planning, execution, and evaluation of Individualized Education Plan (IEP) parent meetings as they relate to young children with hearing loss. The focus of this class will be on two child/family case scenarios. Students will work in multidisciplinary teams to develop and implement IEPs to be conducted in the Center for Experiential Learning and Assessment (CELA). Finally, students will review videotaped sessions of each case scenario to reflect upon their role and responsibilities as members of the IEP team. Summer. [1]

MDE 5584. Independent Practicum. This course allows students to continue work toward degree requirements. This course is graded pass/fail. Fall, Spring, Summer. [0]

MDE 5585. Independent Study and Readings in Deaf Education. Independent Study and Readings in Deaf Education. Fall, Spring, Summer. [1-3]

Speech-Language Pathology

Courses leading to the Master of Science (Speech-Language Pathology)

SLP 5235. Physiological Bases of Communication I. Term 1—the bases of speech production and perception relative to neuroanatomy, anatomy, physiology, acoustics, and acoustic correlates and sound features. Neural mechanisms of speech and language will be related to overall
School of Medicine / Courses of Study

structure and function of the nervous system. Neurologic conditions related to speech and language disorders are surveyed. Fall. [3]

SLP 5236. Physiological Bases of Communication II. Term 2—the bases of speech production and perception relative to neuroanatomy, anatomy, physiology, acoustics, and acoustic correlates and sound features. Neural mechanisms of speech and language will be related to overall structure and function of the nervous system. Neurologic conditions related to speech and language disorders are surveyed. Spring. [1]

SLP 5240. Introduction to Clinical Practicum. This course is for first-year, first-semester MS-SLP graduate students. Topics covered will include professionalism, safety issues, components of therapy session and time management, data collection, behavior management, learning objectives/goal setting, implementing treatment plans, treatment approaches for various diagnoses. This course is graded pass/fail. Fall. [1]

SLP 5280. Child Language Impairments I: Nature. This course is the first in a three-course sequence on child language impairment. The focus of this course is on the characteristics of children with primary as well as secondary language impairment. Students will read the primary research literature (a) to learn skills for comprehending and interpreting the research literature, and (b) to gain knowledge on the linguistic and non-linguistic skills of subgroups of children with language impairment and children at risk for academic failure. In addition, an overview of the Individuals with Disabilities Education Act is provided. The lab component develops basic skills in language sample analysis. Fall. [2]

SLP 5281. Child Language Impairments Iia: Assessment. The primary focus is assessment of developmental and academic oral language skills, birth through high school, with a secondary focus on reading, writing, and intellectual assessment. Assessment measures include developmental scales, commercially published norm-referenced measures, criterion-referenced instruments, research-validated experimental measures, and progress monitoring tools. In addition, students gain knowledge and skills in collaborating with families and teachers on assessment of children’s linguistic abilities. Students develop knowledge and skills to select and implement appropriate assessment instruments, to interpret assessment findings for differential diagnosis and IDEA eligibility, for determination of child and family strengths and needs, and to apply assessment findings for describing present level of performance, writing IEP/IFSP goals and objectives, and planning intervention. The lab component of this course will focus on application and practice of assessment measures and interpretation of assessment findings for families and teachers. Part A of the course focuses on developing students’ knowledge of child language assessment methods. Fall. [1]

SLP 5301. Acoustics and Perception of Speech and Speech Disorders. An examination of the processes of speech production, acoustics, and perception. Emphasis on relevant literature and research techniques in speech science. Fall. [3]

SLP 5304. Child Language Acquisition. The components and processes of normal language development. Relations between language acquisition and social and cognitive aspects of child development as well as literacy development. Survey of developmental psycholinguistic research. This course is appropriate for graduate students with or without previous course work in language development. Fall. [3]

SLP 5305. Clinical Principles and Procedures. Presentation and demonstration of clinical principles and procedures applicable in communication sciences and disorders. Fall. [2]

SLP 5311. Stuttering. Significant research in the field of stuttering, with emphasis on etiology and therapy. The management of fluency disturbances. Spring. [3]

SLP 5314. Articulation Disorders and Clinical Phonetics. The etiology, evaluation, and management of articularatory defects in children and adults. Prerequisite: consent of instructor. Fall. [3]


SLP 5317. Traumatic Brain Injury. Pathophysiology of traumatic brain injury in children and adults; unique and common sequelae, the evaluation and treatment of cognitive/communicative deficits, and special problems of the population. Prerequisite 5300 or 5331 or consent of instructor. Summer. [2]

SLP 5319. Dysphagia. The study of the normal and disordered swallow in pediatric and adult populations. Anatomy and physiology, videofluoroscopic and other assessment procedures, as well as various treatment alternatives and techniques are included. Fall. [3]

SLP 5323. Communication in Autism Spectrum Disorders. The course addresses basic theories and principles associated with communication assessment of and intervention for children with Autism Spectrum Disorders. Auditory characteristics, causative factors, classroom structure, behavior management, communication strategies, social and peer interaction, and family-focused practices are also reviewed. This class also will provide an overview of typical social, play, and linguistic development compared to the features and behavioral characteristics of autism spectrum disorders (ASD). Fall. [2]

SLP 5324. Feeding and Swallowing Disorders in Children. This course focuses on the assessment, diagnosis, and management of dysphagia in children including the role of the speech-language pathologist and multidisciplinary and family-centered, family-supported management. Prerequisite: SLP 5319. Spring. [1]

SLP 5326. Speech Disorders in Craniofacial Anomalies. The etiology, diagnosis, and management of speech defects associated with craniofacial anomalies, with major emphasis on cleft palate. Summer. [1]

SLP 5331. Aphasia. The study of aphasia in adults, including the neuroanatomical basis, etiologies, symptomatology, assessment, differential diagnosis, and treatment. Spring. [3]

SLP 5335. Augmentative and Alternative Communication. This course will cover the theory, rationale, and methods for use of augmentative and alternative communication (AAC) systems with patients with physical, intellectual, and/or cognitive disabilities. Students will be exposed to various low- and high-technology AAC systems and learn how and when to apply each in the treatment of patients with complex communication needs. Fall. [2]

SLP 5336. Voice Disorders. Theories of voice production, with emphasis upon underlying mechanisms that cause vocal defects. Procedures for group and individual management. Summer. [2]

SLP 5338. Research Methods in Communicative Disorders. Research techniques and procedures. Analysis of research examples from the literature. Study of design of experiment, data collection, statistical analysis, and presentation of research findings. Fall. [1]

SLP 5355. Clinical Internship/Externship. Sequence of practicum placements over five semesters for speech-language pathology majors in clinical track. Designed to meet supervised practicum requirements for eventual certification by American Speech-Language-Hearing Association. Sequence of initial part-time internship placements in campus and other local facilities, followed by a full-time externship placement at one of many selected sites throughout the country or abroad. Spring, Summer. [6]

SLP 5357. Professional Issues in Communication Disorders. Examines various professional issues within the fields of speech-language pathology and audiology. For example, ethics, malpractice, quality improvement, marketing, reimbursement, multicultural sensitivity, and federal legislation. Spring. [1]

SLP 5360. Voice Specialty Track Acute Care Experience. This course is designed to expose students to clinical practice in an acute care setting as it pertains to voice and upper airway disorders. Students will observe diagnosis and treatment of communication and swallowing disorders in patients with laryngectomy and other head and neck cancers, in patients with tracheostomy and on ventilators, and with other populations as available. Students will have the opportunity to provide some direct patient care. This course is graded pass/fail. Summer. [1]

SLP 5361. Family-Centered Counseling and Interviewing. Examines the helping relationship in the clinical process, counseling theory relative
to speech-language pathology practices and principles and methods of effective clinical interviewing and counseling. Spring. [1]

SLP 5378. Advanced Voice Instrumentation and Lab. This advanced seminar will discuss the theoretical foundations and practical applications of instrumentation and technology in the assessment and treatment of voice and voice disorders. The focus will be on the development of advanced skills and training in the use of instrumentation and technology in research and clinical practice. Summer. This course is graded pass/fail. [1]


SLP 5391. Advanced Voice Research and Rehabilitation. This advanced seminar will discuss historical and current research in the assessment and treatment of voice disorders. Emphasis will be placed on understanding the theoretical basis of clinical practice in voice and applying standards of evidence-based practice to evaluating therapeutic methods. Prerequisite: Enrolled as master’s degree student in Hearing and Speech Sciences Program. This course is graded pass/fail. Fall. [1]

SLP 5397. Speech-Language-Literacy Seminar. Course limited for enrollment to graduate speech-language pathology masters’ students who are enrolled in the School Speech-Language Pathology Specialty Track. Topics vary each semester; a two-year curriculum of topics prepares students for school-based practice of speech-language pathology.

SLP 5583. Practicum and Clinical Case Conference. This course includes attendance at weekly case conferences where clinical case studies will be presented. The grade for this class will include clinical performance and attendance. Fall, Spring, Summer. [1]

SLP 5584. Independent Practicum. This course allows students to continue work toward degree requirements. This course is graded pass/fail. Fall, Spring, Summer. [0]

SLP 5587. Advanced Clinical Practicum/Case Conference. This course includes attendance at weekly case conferences where clinical case studies will be presented. It reflects additional load of clinical training. The grade for this class will include case conference attendance as well as clinical performance and attendance. Prerequisite: 4 credits of SLP 5583. Spring. [3]

SLP 7999. Master's Thesis Research. Formerly SLP 5369 This course is graded pass/fail. Fall, Spring, Summer. [0]

Laboratory Investigation

Courses leading to the Master of Laboratory Investigation

MLI 5010. Lab Theory I. Formerly MLI 1010] This is a lecture and hands-on course designed for M.L.I. students and covers methods for the production, detection, molecular biology and immunological characterization, purification, and conjugation (e.g., to beads, biotin, dyes, enzymes, etc.) of recombinant proteins and antibodies for research use. Fall, Spring, Summer. [4]

MLI 5011. Lab Theory II. Formerly MLI 1011 This is a lecture and hands-on course designed for M.L.I. students and covers methods for the production, detection, immunological characterization, purification, conjugation (e.g., to beads, biotin, dyes, enzymes, etc.), and assay development of hybridoma monoclonal antibodies for research use. Fall, Spring, Summer. [4]

MLI 5012. Lab Theory III. Lab Theory III (2 didactic credits) is a semester long lecture and hands-on, project management course designed to teach students how to select, characterize and/or modify antigen-specific recombinant antibodies for research, diagnostic or therapeutic use. Data stemming from Lab Theory III projects should address basic research or medical needs and be suitable for publication as a peer reviewed article in a scientific journal.

MLI 5013. Lab Theory IV. Lab Theory IV (2 didactic credits) is a semester long lecture and hands on course designed to teach students technical writing skills and the formalities needed to submit manuscripts for publication that describe projects and project outcomes. Students participating in projects in which manuscripts are accepted for publication will be listed as first author or as a co-author—subject to level of participation as determined by the course instructor.

MLI 5040. Responsible Conduct in Research. Formerly MLI 1040 This required course includes formal lectures and small group discussion on a range of issues encountered in research activities. Included are responsibilities of the investigator and the university to the federal government; scientific misconduct; ethical use of animals in research; ethics of publication, lab management, and grant writing. Summer. [6]

MLI 5200. Foundations in Introductory Biochemistry. Formerly MLI 2200] An introductory course covering fundamental concepts in biological chemistry. Topics include amino acids, proteins, enzymology, and basic carbohydrate and fat metabolism. MLI students only. Summer. [2]

MLI 6020. Research Project. Formerly MLI 3020] This course is designed for students who choose the modified research track. Students will conduct research and present their research formally, but a thesis will not be a requirement. Research must be conducted outside of one’s job requirements. Fall, Spring, Summer. [0-6]

MLI 6025. Independent Study. Formerly MLI 3025] This course allows a student to pursue individualized professional research or training goals. Fall, Spring, Summer. [0-4]

MLI 6030. Training and Techniques I. Formerly MLI 3030] This course is designed for students with a strong academic/research background who are strengthening their laboratory techniques. Students will conduct laboratory research on a project designed by a highly skilled faculty/research scientist preceptor. Includes technical instruction, critical data analysis, experimental design, and literature review. Summer. [0-6]

MLI 6031. Training and Technique Modules: Microscopy. Formerly MLI 3031] Eight-week modules conducting laboratory research on a project designed by a faculty preceptor. Includes technical instruction, critical data analysis, experimental design, and literature review. Summer. [0-3]

MLI 6032. Training and Technique Modules: RT-PCR. Formerly MLI 3032] Eight-week modules conducting laboratory research on a project designed by a faculty preceptor. Includes technical instruction, critical data analysis, experimental design, and literature review. Spring. [0-3]

MLI 6035. Training and Techniques II. Formerly MLI 3035] This course is designed for students with a strong academic/research background who are strengthening their laboratory techniques. Students will conduct laboratory research on a project designed by a highly skilled faculty/research scientist preceptor. Includes technical instruction, critical data analysis, experimental design, and literature review. Spring. [0-3]

MLI 6040. Training & Technique Modules: Fluorescence Activated Cell Sorting. Formerly MLI 3040] Students will learn basic to advanced techniques for using the most advanced Flow Cytometers in use today. This course will include some history of the technology as well as the Eissteinian principles that are the foundation of this technology while practically applying the lessons they learn first-hand on instruments in the Flow Cytometry Core lab. There will be two classes per week for eight weeks culminating in the challenge of applying what students have learned to diagnose and repair a non-functional cytometer. Spring. [0-2]

MLI 6041. Training & Technique Module: Immunohistochemistry & Immunofluorescence. Formerly MLI 3041] Immunohistochemistry (IHC) and immunofluorescence (IF) is a lecture and hands-on techniques course designed to teach students the principles and procedures needed to conjugate antibodies to biotin, dyes and enzymes and to use conjugated antibodies to detect antigens present in tissue samples at the microscopic level. [2]

MLI 7999. Thesis Research and Defense. Formerly MLI 3010] This course is designed for students who choose the thesis track and will develop a research project and thesis under the direction of a mentor. Fall, Spring, Summer. [1-12]
Medical Physics

Courses leading to the Doctor of Medical Physics and the Master of Science in Medical Physics

Diagnostic Radiology

RAMD 5301. Medical Physics Seminar I. Topics in medical imaging, techniques and applications. Fall, Spring. [1]

RAMD 5313. Clinical Diagnostic Physics. Instrumentation and application of physics to clinical diagnostic imaging procedures including radiographic and fluoroscopic x-ray, CT, MRI, nuclear medicine, and ultrasound. Fall. [3]

RAMD 5317. Laboratory In Clinical Diagnostic Physics. Laboratory In the application of principles, techniques, and equipment used in radiographic and fluoroscopic x-ray, CT, MRI, nuclear medicine, and ultrasound. Fall. [2]

RAMD 5331. Physics of Medical Imaging. Physical, mathematical, and signal processing concepts associated with medical image formation and analysis. Introduction to techniques used to generate medical images using ionizing radiation, non-ionizing radiation, and sound waves. Medical imaging modalities to be discussed include general radiography, Computed Tomography, Nuclear Medicine (SPECT and PET), Magnetic Resonance, and Ultrasound.

RAMD 5390. Master's Independent Study (Diagnostic). Introductory problem-solving topic in diagnostic medical physics including data taking, analysis, and write-up. [1-2]

RAMD 5391. Medical Physics Diagnostic Practicum I. Experience and training in a diagnostic physics clinical setting; instrumentation methodology, calibration, and quality assurance. This course also includes diagnostic radiology patient interaction, clinical conference attendance, and review of imaging techniques in radiology. [1-4]

RAMD 5392. Medical Physics Diagnostic Practicum II. Experience and training in a diagnostic physics clinical setting; instrumentation methodology, calibration, and quality assurance. This course also includes diagnostic radiology patient interaction, clinical conference attendance, and review of imaging techniques in radiology. [1-4]

RAMD 5393. Doctoral Independent Study I. Advanced problem-solving topic in diagnostic medical physics including literature survey, data taking, analysis, and manuscript submission. [1-3]

RAMD 5394. Doctoral Independent Study II. Advanced problem-solving topic in diagnostic medical physics including literature survey, data taking, analysis, and manuscript submission. [1-3]

RAMD 5395. Medical Physics Clinical Rotations I. Advanced experience and clinical training in a diagnostic radiology department setting; instrumentation (methodology and calibration), quality assurance, and problem solving. For third- and fourth-year doctoral students. Fall, Spring, Summer. [3-6]

RAMD 5396. Medical Physics Clinical Rotations II. Advanced experience and clinical training in a diagnostic radiology department setting; instrumentation (methodology and calibration), quality assurance, and problem solving. For third- and fourth-year doctoral students. Fall, Spring, Summer. [3-6]

RAMD 5397. Medical Physics Clinical Rotations III. Advanced experience and clinical training in a diagnostic radiology department setting; instrumentation (methodology and calibration), quality assurance, and problem solving. For third- and fourth-year doctoral students. Fall, Spring, Summer. [3-6]

RAMD 5401. Medical Physics Seminar II. Topics in medical imaging, techniques and applications. [1]

Therapeutic Radiology

RAMT 5248. Radiation Biophysics. Response of mammalian cells and systems to ionizing radiation, the acute radiation syndromes, carcinogenesis, genetic effects, and radiobiological basis of radiotherapy. Fall. [2]

RAMT 5301. Medical Physics Seminar I. Radiotherapy treatment techniques and current methodologies in clinical therapy physics. Fall. [1]


RAMT 5311. Clinical Therapy Physics I. Instrumentation and application of physics to clinical radiotherapy procedures, equations for absorbed dose calculations, phantoms, methodologies in computerized treatment planning, and introduction to the special techniques of IMRT, RAPID ARC, and stereotactic radiosurgery. Fall. [3]

RAMT 5312. Clinical Therapy Physics II. Photon and electron beam algorithms for dosimetry calculations, Methodologies in three-dimensional treatment planning with special applications to radiotherapy. Spring. [3]

RAMT 5314. Clinical Therapy Physics: Lab I. Introductory laboratory applications of physics to clinical radiotherapy procedures, experience with equipment in a modern clinical radiotherapy environment, methodology and techniques for the verifications of simulated clinical procedures. [2]

RAMT 5315. Clinical Therapy Physics: Lab II. Advanced laboratory applications of physics to clinical radiotherapy procedures, experience with radiotherapy physics equipment including measurement of absorbed dose using multiple dosimetry systems and techniques for the quality assurance verification of special radiotherapy clinical procedures. [2]

RAMT 5316. Brachytherapy Physics. Instrumentation and applications of physics to clinical brachytherapy procedures, equations for absorbed dose calculations including TG#43, methodologies in computerized treatment planning, and introduction to special techniques. [3]

RAMT 5390. Master's Independent Study (Therapeutic). Introductory problem-solving topic in therapy medical physics including data taking, analysis, and write-up. [1-2]

RAMT 5391. Medical Physics Therapeutic Practicum I. Experience and training in a radiotherapy physics clinical setting; treatment planning, instrumentation calibration, and quality assurance. This course also includes radiotherapy patient interaction, clinical conference attendance, and review of treatment techniques in radiation oncology. Fall, Spring, Summer. [1-4]

RAMT 5392. Medical Physics Therapeutic Practicum II. Experience and training in a radiotherapy physics clinical setting; treatment planning, instrumentation calibration, and quality assurance. This course also includes radiotherapy patient interaction, clinical conference attendance, and review of treatment techniques in radiation oncology. Fall, Spring, Summer. [1-4]

RAMT 5393. Doctoral Independent Study I. Advanced problem-solving topic in therapy medical physics including literature survey, data taking, analysis, and manuscript submission. [1-3]

RAMT 5394. Doctoral Independent Study II. Advanced problem-solving topic in therapy medical physics including literature survey, data taking, analysis, and manuscript submission. [1-3]

RAMT 5395. Medical Physics Clinical Rotations I. Advanced experience and clinical training in a radiation oncology department setting; instrumentation (methodology and calibration), treatment planing, instrumentation calibration, and quality assurance. This course also includes radiotherapy patient interaction, clinical conference attendance, and review of treatment techniques in radiation oncology. Fall, Spring, Summer. [1-4]

RAMT 5396. Medical Physics Clinical Rotations II. Advanced experience and clinical training in a radiation oncology department setting; instrumentation (methodology and calibration), treatment planning, instrumentation calibration, quality assurance, and problem solving. For third- and fourth-year doctoral students. Fall, Spring, Summer. [3-6]

RAMT 5397. Medical Physics Clinical Rotations III. Advanced experience and clinical training in a radiation oncology department setting; treatment planning, instrumentation calibration, quality assurance, and problem solving. For third- and fourth-year doctoral students. Fall, Spring, Summer. [3-6]
RAMT 5397. Medical Physics Clinical Rotations III. Advanced experience and clinical training in a radiation oncology department setting; treatment planning, instrumentation calibration, quality assurance, and problem solving. For third- and fourth-year doctoral students. Fall, Spring, Summer. [3-6]

RAMT 5401. Medical Physics Seminar II. Topics in clinical therapy physics, techniques and application. Fall. [1]

Public Health

Courses leading to the Master of Public Health

PUBH 5501. Epidemiology I. This course focuses on measures of disease frequency and association, observational study design, and diagnostic and screening tests. The course reviews the use of these tools and the role of epidemiology in measuring disease in populations, estimating risks, and influencing public policy. Study designs reviewed include cross sectional, ecologic, case-control, and cohort studies. This course is required for all students in the M.P.H. Program. Enrollment is limited due to space restrictions, with priority given to global health students in the M.P.H. Program.

PUBH 5502. Biostatistics I. This course addresses basic concepts and methods of biostatistics, including data description and exploratory data analysis, study design and sample size calculations, probability, sampling distributions, estimation, confidence intervals, hypothesis testing, nonparametric tests, analysis of continuous, categorical, and survival data, data analysis for cohort and case-control studies, relative risk and odds ratio estimation, and introduction to linear and logistic regression. This course is required for students in the M.P.H. Program. Enrollment is limited. Fall. [4]

PUBH 5505. Public Health Ethics. This course examines the ethical dimensions of public health research, practice, and policy. Students will become familiar with the language and literature of public health ethics as they explore ethical dilemmas pertaining to the values, principles, rights, and beliefs that shape concepts of research and health care. This course is required for all students in the M.P.H. Program.

PUBH 5508. Epidemiology II: Non-randomized Study Design. This course addresses the design of non-randomized studies and factors that are important in design selection. This includes the design of cohort studies, prospective and retrospective cohort studies, assembly and follow-up of the cohort, exposure measurement, outcome ascertertainment, confounders, effect modification, calculation of measures of occurrence and effect, summary of multivariate statistical analyses for cohort studies; the case-control study, conditions necessary for validity of the case-control study, selection of controls, sources of bias in case-control studies, and multivariate analysis; as well as the ecological study, including when to use and when to avoid. The course includes didactic lectures and critical reading of important epidemiologic studies from the current medical literature. This course is required for students in the Epidemiology track of the M.P.H. Program. Prerequisite: Epidemiology I, Biostatistics II, Clinical Trials, or approval of instructor. Enrollment is limited due to space restrictions, with priority given to students in the M.P.H. and M.S.C.I. programs.

PUBH 5509. Biostatistics II. This course addresses modern multivariate analyses based on the concept of generalized linear models. This includes linear, logistic, and Poisson regression, survival analysis, fixed effects analysis of variance, and repeated measures analysis of variance. The course emphasizes underlying similarity of these methods, how to choose the right method for specific problems, common aspects of model construction, and the testing of model assumptions through influence and residual analyses. This course is required for students in the Epidemiology and Health Policy tracks of the M.P.H. Program. Prerequisite: Biostatistics I or consent of the instructor. Enrollment is limited due to space restrictions, with priority given to students in the M.P.H. Program.

PUBH 5510. Measurement and Analysis for Healthcare Improvement. This course takes a deep dive into understanding measures commonly used to assess quality in health and health care. At the end of the course students will be able to critically assess, analyze, and communicate health care data. Prerequisite: PUBH 5501 Epidemiology I and PUBH 5502 Biostatistics I, or instructor approval.

PUBH 5512. Decision Analysis in Medicine and Public Health. This course provides an overview of qualitative and quantitative decision making with a dominant focus on quantitative techniques, using clinical and economic endpoints and their role in clinical strategies of care and health policy. Topics include: cognitive heuristics, Bayes' theorem, ROC analysis, the study of diagnostic tests, meta-analysis, health states and utility measurement using expected value decision making, decision tree analysis, Markov processes and network simulation modeling, quantitative management of uncertainty, cost theory and accounting, cost-effectiveness and cost-utility analysis.

PUBH 5516. Public Health Practice. Public Health Practice will introduce students to key topics, concepts and methods in Environmental Health and Public Health Surveillance. Basic environmental epidemiology, use of evidence in policy and practice, along with an overview of the main environmental exposures will be explored. This course also examines an overview of public health surveillance as a lens to public health practice, in terms of how public health programs are organized, financed, and operated and what surveillance data are available to inform specific programs. Public health practitioners and policy-makers who plan, implement, and evaluate infectious disease, chronic disease, injury, and disability prevention and control programs have a need for reliable information about the status and trends of these health problems among the populations they serve. Surveillance systems provide information for action. Analyzing, interpreting and using public health surveillance data inform the design, operation, and delivery of public health programs and target public health action and disease control. Public health surveillance is the ongoing process that public health agencies use to collect, manage, analyze, interpret and disseminate this information. We will review basic approaches to public health surveillance, including disease reporting regulations and notifiable diseases, surveillance for infectious diseases, chronic diseases, and adverse events, uses of surveillance data, and how surveillance data can inform public health program, policy, and practice. The course will be taught by a multidisciplinary group of faculty using didactic and interactive elements of instruction.

PUBH 5517. Grant Writing. This course provides a foundation in grant writing for the early career scientist or public health practitioner. It includes seven core sessions, nine elective sessions (from which students must choose at least four), and a mock grant review experience. Core topics include an overview of funding agencies and award mechanisms, as well as how to identify funding opportunities, plan an application, construct an impactful research plan, develop a budget, and succeed at grantmanship. Elective sessions discuss applying for specific types of grants including career development, global health, health policy, and programmatic awards; VUMC institutional awards and resources; VA grants; NIH biosketch development; research mentorship; and training in the responsible conduct of research. Students will also learn how grants are reviewed and scored, and participate in a mock grant review, choosing either career development award applications or programmatic grants. Enrollment is limited to students in the M.P.H. and M.S.C.I. programs, or by permission of the instructor.

PUBH 5518. Research Ethics. This course presents issues in the responsible conduct of research, including ethics, data management, research fraud, academic misconduct, and conflict of interest. The course covers federal and institutional guidelines regarding research in human and animal subjects. Topics include vulnerable populations in research, confidentiality, and the Institutional Review Board (IRB). The course is required for students in the Epidemiology and Health Policy tracks of the M.P.H. Program. Enrollment is limited to students in the M.P.H. and M.S.C.I. programs, or by permission of the instructor.

PUBH 5520. Introduction to Health Policy. The aim of this course is to provide students with an overview of the U.S. health care system and key features of its financing and delivery. We will discuss the strengths and weaknesses of our health care system, historical trends, and how we compare to other countries. Moreover, we will discuss the major components of the Affordable Care Act and implementation challenges going
PUBH 5521. Survey Research Seminar. The Survey Research Seminar is a didactic and participatory graduate-level class. It is designed to introduce key concepts and skills in survey methodology and the application of those skills to public health research. The course includes content on survey modes, sampling, questionnaire development, and survey implementation. The student will develop a research question, recruitment materials, and a short questionnaire based on the theory and skills learned in the course. This course is required for students in the M.P.H. Program.

PUBH 5522. Qualitative Health Research Methods I. This course is designed to provide an introduction to qualitative research methods, with a focus on research in health behavior, health care delivery, and sociocultural norms that impact health and well-being, although these methods can be applied easily to other arenas. The primary skills we will develop include techniques of the case study method; including interviews, focus groups, and observation. Introductions to mixed methods will also be included. We will also consider strategies for validity and reliability, and the relevance of standard evaluative criteria such as objectivity, neutrality, and generalizability. This course is required for students in the M.P.H. Program.

PUBH 5523. Qualitative Health Research Methods II. This course is an extension of the one credit hour Qualitative Health Research Methods I course. During this course, students will pilot, refine, and employ their own qualitative interview guide to collect qualitative data. Students will receive qualitative data analysis training and will undertake to analyze the data from their pilot. The final project will include a write-up of the methods, data analysis, and discussion of findings. This course is an elective for students in the M.P.H. Program. Pre-requisite: Qualitative Health Research Methods I.

PUBH 5524. The Science of Health Behavior. This course will provide an overview of social and behavioral science theories that are currently used to (a) understand health behaviors; and (b) guide the development of interventions to prevent, reduce, or eliminate major public health problems. We will also explore how technologies (i.e., patient portals, mobile devices, and the Internet) are used to promote health behaviors, disparities in the performance of health behaviors, and how behavioral interventions attempt to address and reduce these disparities. This course is required for all students in the M.P.H. Program.

PUBH 5525. Health Economics. This course is intended to survey the major topics in Health Economics. Each class is organized around a topical theme: those themes include health reform, health insurance, health promotion and disease prevention, and the health care workforce. Each theme will be approached from an economic perspective using recent articles from the literature. This course is required for students in the Health Policy track of the M.P.H. Program.

PUBH 5526. Global Health Project Development. This course focuses on development of the individual student’s M.P.H. practicum and thesis including the identification of a key global health question and design of a suitable project to address the question. Each from an interdisciplinary team will complete a relevant skill-process activity, a draft of his/her practicum agreement, and a project development concept paper. Enrollment is limited to students in the M.P.H. Program.

PUBH 5527. Protocol Development I. This course is designed to prepare students to plan and conduct an independent thesis research project. Students will strengthen their ability to assess whether a research strategy appropriately addresses study questions, with an emphasis on evaluating data sources, study population, measurement, and analysis approach. They will also develop management and logistical skills necessary for conducting public health research. Enrollment is limited to students in M.P.H. Program.

PUBH 5528. MPH Project Extension. Fall, Spring, Summer. [0] Staff.

PUBH 5530. Protocol Development II. This course focuses on development of the individual student’s research protocol. Each student will present the background, methods, and limitations of their proposed research design in class, and complete the research protocol for the M.P.H. master’s thesis. Enrollment is limited to students in the M.P.H. Program.

PUBH 5536. Public Health Practicum. Required as part of the M.P.H. Program, the public health practicum is intended to give students the opportunity to develop practical skills and competencies in public health practice settings.

PUBH 5538. Health Services Administration: Program and Policy Evaluation. This course addresses the evaluation of changes in the health care delivery system, either through programs specifically implemented to achieve such changes or through changes in health care delivery systems. This course is required for students in the Health Policy track of the M.P.H. Program. Prerequisite: Epidemiology II, Biostatistics II, or approval of instructor.

PUBH 5540. Health Services Administration: Leadership and Management in Global Health. This course introduces students to principles of management and leadership of global health programs and organizations in complex and challenging environments. Students will explore diverse health systems, organizational behavior, health policy, program design, and core management techniques. Required for students in the Global Health track of the M.P.H. Program.

PUBH 5541. Essential Skills in Global Health. This course introduces students to core research, field tools, assessment and implementation techniques, and evaluation methodologies commonly used in the field of global health. Students explore theories and practices used to analyze issues and intervene in global health and they examine determinants of global health and development from an international perspective. Health and developmental issues across nations and cultures that require collective, partnership-based action are highlighted. The course is taught by an interdisciplinary team of faculty members using didactic, interactive and practical elements of instruction. This course is required for students in the Global Health track of the M.P.H. program and may be taken as credit toward the Global Health Certificate.

PUBH 5542. Foundations of Global Health. This course introduces students to key topics, concepts and methods in global health, examining determinants of complex issues and multi-dimensional approaches and interventions with a particular emphasis on low-resource settings. Taught by an interdisciplinary team of faculty members, this course uses didactic, interactive and practical elements of instruction to address international and cross-cultural health and developmental issues. At the conclusion of the course, students should be able to discuss major topics in global health and design suitable projects that address global health challenges. This course is required for students in the Global Health track of the M.P.H. program and may be taken as credit toward the graduate certificate in global health.

PUBH 5543. Informatics for Global Health Professionals. With an emphasis on global health settings, this course introduces students to medical informatics and the use of innovative technologies for the storage, retrieval, dissemination, and application of biomedical knowledge. As global health bridges both patient care and public health, so informatics in this context covers both patient-based information systems and public health information systems. International cooperation on health information system issues has resulted in both extensive knowledge repositories and a powerful set of tools and techniques that can be used by practitioners and researchers. The course consists of lectures with discussion and analysis as well as hands-on instruction with some software applications and electronic resources. This course is offered as an elective for students in the Global Health track of the M.P.H. Program and may be taken as credit toward the Global Health Certificate. [1]
PUBH 5544. Ethics in Global Health. This course provides an overview of ethical issues and standards in global health, particularly with respect to ethics in international research. Its aim is to provide students in the health professions and others interested in global health with a framework in which to recognize, examine, resolve, and prevent ethical conflicts in their international work. Through readings, lectures and discussion, students will explore diverse historical and contemporary international perspectives on the concepts of ethics and health as well as formulating recommendations for prevention and resolution of ethical conflicts related to global health. This course is required for students in the Global Health track of the M.P.H. Program and may be taken as credit toward the graduate certificate in global health. Spring.

PUBH 5549. Case Studies in Tropical Diseases. This course introduces tropical diseases and parasitology in a clinical case study format with student group leadership that is facilitated by faculty with substantial front-line tropical medicine training and experience. Written case protocols will be presented by faculty members and Infectious Disease fellows/Intern Medicine residents who will lead an interactive discussion involving pathophysiology, clinical presentation, differential diagnosis, diagnosis and treatment. This course may be taken as elective credit toward the M.P.H. degree and the graduate certificate in global health. Summer.

PUBH 5550. Global Health Politics and Policy. Global Health Politics and Policy introduces core global health problems facing the world’s population today and examines the efforts taken to improve health at a global level. It focuses on the social and political movements of global health issues and how these forces created and shaped global health policy both in the U.S. and among the G8 nations from 2000-2011. This course may be taken as elective credit toward the M.P.H. degree and the graduate certificate in global health. Spring.

PUBH 5556. Laboratory Technologies in Low-Resource Settings. This course addresses core laboratory principles, technologies, and applications used in the delivery of care and the performance of clinical research in resource-limited settings. It covers strengths, limitations, and appropriate use of laboratory technologies in the changing landscape of international research and clinical care. This course is offered as an elective in the Global Health track of the M.P.H. Program and may be taken as credit toward the graduate certificate in global health.

PUBH 5557. Protocol Development for Global Health. This course focuses on development of the individual student’s M.P.H. thesis protocol for the Global Health track. Each student will develop the background, methods, and limitations of their proposed research design in class. In addition, the course will include a one-on-one session with Dr. Yuwei Zhu to review the statistical analysis plan for the thesis work. Each student’s thesis advisor(s) will be invited to participate. This course is required for and limited to students in the Global Health track of the M.P.H. Program.

PUBH 5590. Independent Study. Content varies according to individual needs and interests. A contract is made between the student and the faculty sponsor, with copies for the student, the sponsor, the program director, and the student’s record. MPH Program Director approval required.

PUBH 5599. MPH Thesis Research I. The primary objective is the completion of the M.P.H. Program’s thesis. Each student will work independently to coordinate research activities with his or her thesis committee.

PUBH 7999. MPH Thesis Research II. [Formerly PUBH 5519] In this research seminar required as part of the M.P.H. Program, second-year students present the results of their master’s thesis research. Each 40-minute presentation addresses the background and significance, methods, results, and public health/research implications. Presentations are scheduled through the course director on a first come, first served basis. Before presenting their work, students must obtain the approval of their thesis committee.

Applied Clinical Informatics

Courses leading to the Master of Science in Applied Clinical Informatics

ACI 6110. Introduction to Clinical Informatics. This course provides health care professionals with a basic and practical understanding of fundamental concepts in clinical informatics. Topics covered in the course include a history of biomedical informatics, review health information systems, clinical decision support, quality improvement, consumer health, human-system interactions, and others. Completion of this course will lay the groundwork for subsequent deep study of many of the individual topics covered.

ACI 6111. Foundations of Health Information Technology. This course will provide a strong foundation for understanding the current state and key topics in health information technology. Students will begin with a review of computer programs and systems, and then build on top of this framework detailed information on the structure of health care data and the architecture of supporting systems. Data exchange, interoperability and data networks will be covered, along with key concepts for data security and privacy. Students will utilize multiple modalities of digital learning, and will participate in projects at different points during the course. Health information technology skills and knowledge will be assessed incrementally throughout the course.

ACI 6112. The Health System. This introductory course provides a broad overview of actors & organizations comprising our health care systems as well as the societal and organizational trends facing consumers, clinicians, executives, and policy-makers. It will provide an overview of some of the major characteristics of the American health care system that in turn drive health care delivery and clinical informatics priorities. Topics will include a historical overview of the American Health Care system, health care economics and financing, current regulatory issues, and other factors both influencing current informatics initiatives and suggesting future opportunities for innovative informatics solutions.

ACI 6120. Clinical Decision Support and Evidence-Based Patient Care. This course will focus on the design, implementation, and evaluation of clinical decision support features of clinical information systems. Topics to be addressed include cognitive aspects of human decision making, decision science, knowledge management, workflow, evidence-based patient care, and facilitated information retrieval. Many existing CDS examples will be reviewed and evaluated and students will be expected to design a novel CDS as part of their final project.

ACI 6121. Clinical Information System and Applications. The digitization of health care data and delivery of care functionality has been occurring on the small scale for nearly 50 years in clinical information systems. Clinical information systems are comprised of multiple components that comprise clinical information. Beginning in the 1990s, electronic health record (EHR) systems began to emerge as a foundational tool for clinical information systems that brought together various aspects of health care such as billing, documentation, and order entry. By the mid-2000s the basic underpinnings of a comprehensive EHR were understood, but uptake was still very low. This situation changed fundamentally over the past decade and EHRs and related clinical information systems are now ubiquitous. The goal of this course is to provide a framework to understand the underpinnings of modern clinical information systems and the integration of these systems that enable their basic and extended functionalities. Furthermore, with health care consumers having more opportunities to be involved with their health information, we will explore the evolution of consumer informatics. Finally, we will discuss emerging trends in the digitization of health care data including mobile health and telemedicine.

ACI 6122. Workflow, User-Centered Design, and Implementation. The course will cover three main topic areas: workflow, user-centered design, and implementation. Each topic area will include three course segments: principles, methods, and applications. In the principles section for each topic, the course will clearly define terminology related to the topic area (e.g., What is workflow?), review how key concepts relate to each other (e.g., relationship between human factors engineering and human-computer interaction), and examine the relevance of the topic area in Applied Clinical Informatics. The methodology section for each topic will...
address qualitative, quantitative, and computational methods used for the
design, implementation, and evaluation of health information technology.
The applications section for each topic will use case studies based in the
topic area to examine the real world application of principles and methods.
The course will cover a wide range of contexts, from homes/communities
to organizations to a broader regional scale.

ACI 6130. Data to Knowledge (Clinical Data Standards). This course
introduces students to fundamental principles about terminologies and
data standards and their importance in interoperability and health infor-
mation exchange. It will focus on clinical data standards with respect to
syntactic and semantic interoperability by covering data exchange and
messaging standards (e.g., HL7), clinical terminology standards (e.g.,
SNOMED), document standards (e.g., HL7 CDA).

ACI 6131. Clinical Information System Lifecycle. This course will
cover all aspects of designing, implementing and supporting systems. The
course will be taught with reference to both the System Development Life
Cycle (SDLC) and Information Lifecycle Management (ILM) frameworks.
Areas covered will include project conceptualization, methods for require-
ments gathering, risk analysis and mitigation, total cost of ownership,
and implementation and support. Planning and management of disaster
recovery and business continuity will also be covered, as well as methods
of evaluating effectiveness and return on investment.

ACI 6132. Management and Organizational Change. This course will
focus on the management skills needed to direct the informatics activities
of large organizations, and to lead changes in technology that may be
disruptive. As part of the course curriculum, students will learn leadership
models, processes, and practices, effective interdisciplinary communica-
tion and team formation, project management, and strategic and financial
planning for new clinical information systems.

ACI 7110. Practicum Experience. This course will arrange for students
to rotate through health IT operational teams based on their interests and
team availability. As part of being embedded in an IT operation, students
will be expected to complete limited assignments to advance the team
agenda.

ACI 7111. Capstone Project Planning. Students will begin the process
of planning for their second-year Capstone project beginning with a fac-
culty mentor selection, needs assessment and design phase leading up to
a formal project proposal and submission of development specifications
at the conclusion of the second semester. Project plans will be formally
evaluated and will require approval prior to proceeding to implementation
and evaluation.

ACI 7120. Practicum Experience. This course will arrange for students
to rotate through health IT operational teams based on their interests and
team availability. As part of being embedded in an IT operation, students
will be expected to complete limited assignments to advance the team
agenda.

ACI 7121. Capstone Project Planning. Students will continue the pro-
cess of planning for their second-year Capstone project. Project plans
will be formally evaluated and will require approval prior to proceeding to
implementation and evaluation.

ACI 7210. Practicum Experience. This course will arrange for students
to rotate through health IT operational teams based on their interests and
team availability. As part of being embedded in an IT operation, students
will be expected to complete limited assignments to advance the team
agenda.

ACI 7211. Capstone Project Implementation and Evaluations. Based on
an approved project plan from the first year, students will imple-
ment and evaluate a Capstone project in conjunction with a clinical infor-
matics operations team at their home institution. The Capstone Project
is designed to provide students with knowledge and skills required to
design and conduct applied research studies to evaluate the efficacy of
informatics applications in the clinical environment. Based on personal
career objectives and informatics challenges that they identify in practi-
cum course, the capstone project will have the flexibility to be completed
as a group or individually. Each student will have a faculty mentor and,
if applicable, a practice mentor within the student’s home department/
organization.

ACI 7220. Practicum Experience. This course will arrange for students
to rotate through health IT operational teams based on their interests and
team availability. As part of being embedded in an IT operation, students
will be expected to complete limited assignments to advance the team
agenda.

ACI 7221. Capstone Project Implementation and Evaluations. Based on
an approved project plan from the first year, students will imple-
ment and evaluate a Capstone project in conjunction with a clinical infor-
matics operations team at their home institution. The Capstone Project
is designed to provide students with knowledge and skills required to
design and conduct applied research studies to evaluate the efficacy of
informatics applications in the clinical environment. Based on personal
career objectives and informatics challenges that they identify in practi-
cum course, the capstone project will have the flexibility to be completed
as a group or individually. Each student will have a faculty mentor and,
if applicable, a practice mentor within the student’s home department/
organization.

Genetic Counseling
GC 6010. Introduction to Genetic Counseling. The first half of this
course will introduce the student to the framework of the genetic counsel-
ing profession, including the history, practice standards, principles, and
code of ethics. The second half of this course will introduce the application
of the genetic counseling framework via the client-provider relationship
(defining and describing the qualities of the genetic counseling interaction)
and various counseling theories. We will draw on the Reciprocal Engage-
ment Model of genetic counseling to discuss the therapeutic approach,
contracting, basic empathic interviewing, and client assessment. Other
theories that will be discussed in depth include: cognitive behavioral the-
ory, family systems theory, feminist theory, multicultural counseling, exis-
tential therapy, and person-centered therapy.

GC 6015. Theories of Human Experience. This course guides students
through theory and literature to support understanding of health-related
behaviors and the human experience of grief and loss. Topics include
health behavior and human motivation, stress and coping theory, adapta-
tion theory and grief theories, as well as theories to provide context into
families and culture. The theories and frameworks covered in this course
will support the students’ education in theory-based research as well as
provide context and specificity to the delivery of evidence-based genetic
counseling interventions. Pre-requisite: GC6010.

GC 6020. Applied Genetic Counseling Theory. This course augments
clinical rotations during the summer between the first and second years
of the master’s degree program. Students will identify psychotherapeutic
and educational issues in cases from their clinical rotations. These issues
will be addressed through group discussion and practice of counseling
approaches and interventions. Students will also build on their clinical
skills of how to approach and work-up genetic counseling cases. Pre-
quisite: GC6015

GC 6030. Advanced Genetic Counseling. This skills-based, interactive,
class will utilize standardized patients, role play, and discussion to practice
advanced genetic counseling techniques. This course will encourage explo-
ration of techniques grounded in counseling theory to gain confidence in
the counseling process, including dynamics of grief and bereavement, crisis
intervention, and multicultural sensitivity. Students will develop a sophisti-
cated understanding of content and process and will be able to formulate
a comprehensive biopsychosocial assessment and counseling approach.
This class will be interactive with minimal lecture time. Prerequisite: GC6015

GC 6500. Human Development. This course will use a systems-based
approach to familiarize the students with human developmental biology
and embryology. Students will use this knowledge to understand common
human malformations and genetic syndromes. The course will include lec-
tures and case-based learning activities focusing on human reproduction
and pre- and postnatal development.
GC 6510. Medical Genetics 1. The purpose of this course is to provide a framework for the study of human genetics with clinical examples to illustrate the application of the main principles. Topics covered this semester will include: gene structure and function, chromosomal abnormalities, single gene inheritance, molecular, cellular and biochemical basis of genetic disease, complex and multifactorial inheritance, genetic diversity, and population genetics. Techniques of genetic analysis will be introduced.

GC 6520. Laboratory Sciences in Medical Genetics. Exposure to the clinical laboratory including ordering, lab utilization management, techniques, and reporting in the areas of molecular genetics, cytogenetics, biochemical genetics, genomics, personalized medicine, pharmacogenetics, genetic tumor screening will be provided. There will be extensive review of gene variant analysis and reporting for clinical relevance.

GC 6610. Research for Genetic Counselors 1. Research for Genetic Counselors I & II will explore the research process, with a focus on genetic counseling research. The course will introduce the skills students will need to develop a thesis proposal and complete their thesis research. This course implements application of research components and will be heavily discussion based. Each student will identify and develop his or her thesis proposal throughout this two semester course. As topics are discussed in class, students will apply knowledge to those aspects of the development of their theses. This will culminate in the presentation of their thesis proposals to the committee at the end of the second semester. Topics addressed during the first semester will include: basic principles of study design, critical reading of the literature, and developing a statistical plan.

GC 6615. Research for Genetic Counselors 2. Research for Genetic Counselors 2 will explore the research process, with a focus on genetic counseling research. The course will introduce the skills students will need to develop a thesis proposal and complete their thesis research. This course implements application of research components and will be heavily discussion based. Each student will identify and develop his or her thesis proposal throughout this two semester course. As topics are discussed in class, students will apply knowledge to those aspects of the development of their theses. This will culminate in the presentation of their thesis proposals to the committee at the end of the second semester. Topics addressed during the first semester will include: qualitative and quantitative research methods, collection and management of data, human subjects research, and the IRB, the informed consent process, and research ethics. Prerequisite: GC6610.

GC 7000. Genomics in Public Health. Genomics in Public Health will focus on demonstrating the use of epidemiology and population-based screening to create health policy. Exploration of how genetic counselors can use their clinical and research skills to critically review the impact of health policy will be covered, especially as it relates to health care delivery and access, and patient and provider education. The importance of metrics and the use of community, regional, and national health resources will be emphasized. This course will review health policy and legislation which relate to medical genetics.

GC 7010. Professional Issues 1. This course will focus on professional development for new genetic counselors. Topics are organized into sections and will address skills needed to secure employment, function as a genetic counselor in both clinical and non-clinical settings, and management demands of working in a helping profession. Content addressed will include CV and cover letter development, job searching and negotiation techniques, financial and reimbursement issues, and expanding roles for genetic counselors, professional conduct, leadership skills, professional development and mentorship and self-care techniques.

GC 7015. Professional Issues 2. This course will explore in more depth the role of genetic counselors in research, education, and leadership. Topics include research funding, grant writing, working in a research team, conflicts of interest, supervision skills, genetic counseling outcome research and preparing for board examination and obtaining licensure. Students will participate in group activities, professional panel discussions, and interactive role plays. Prerequisite: GC7010.

GC 7500. Topics in Clinical Genetics. Students, faculty, and guests participate in the presentation and critical review of current and emerging topics and interests in the field of human genetics and genetic counseling. Students will develop skills in critical evaluation of medical literature, assessment of emerging interests and topics, and presentation of original research.

GC 7510. Genetic Counseling Pre-Practicum. This course will allow students the opportunity to practice genetic counseling skills (listening and reflecting techniques, empathy, medical history taking, pedigree construction, patient education) which are presented in Introduction to Genetic Counseling (GC7500). The course is designed to be practice-oriented, and it will provide a safe place to explore new skills. Experience-based learning using standardized patients to practice medical communication techniques, roleplay, and flipped classroom strategies will be employed. The RIME (Reporter, Interpreter, Manager, Educator) framework will be introduced as a competency-based assessment tool to set expectations for assessing the progress of student performance throughout their clinical training. As part of this course students will attend a weekly case conference with colleagues in which cases will be presented and discussed.

GC 7515. Genetic Counseling Practicum 1. Genetic Counseling Practicum 1 is part of a Genetic Counseling Practicum series that provides students the opportunity to integrate knowledge, skills and attitudes (KSA’s) of genetic counseling in a clinical setting. Within the RIME framework the goal of this course is to consistently demonstrate the reporter level skills learned from their Pre-Practicum Course (GC7510), and integrate skills from the interpreter level at least 50 percent of the time. As part of this course students will attend a weekly case conference with colleagues in which cases will be presented and discussed. Prerequisite: GC7510.

GC 7520. Genetic Counseling Practicum 2. Genetic Counseling Practicum 2 is part of a Genetic Counseling Practicum series that provides students the opportunity to integrate knowledge, skills and attitudes (KSA’s) of genetic counseling in a clinical setting. This series utilizes the RIME framework (Reporter, Interpreter, Manager, Educator), which is a framework used frequently in medical education to set expectations for student performance throughout their clinical training. The goal of this course is to consistently demonstrate the reporter and interpreter level skills learned and applied in the prerequisite courses. As part of this course students will attend a weekly case conference with colleagues in which cases will be presented and discussed. Prerequisite: GC7515.

GC 7525. Genetic Counseling Practicum 3. Genetic Counseling Practicum 3 is part of a Genetic Counseling Practicum series that provides students the opportunity to integrate knowledge, skills and attitudes (KSA’s) of genetic counseling in a clinical setting. This series utilizes the RIME framework (Reporter, Interpreter, Manager, Educator), which is a framework used frequently in medical education to set expectations for student performance throughout their clinical training. The goal of this course is to consistently demonstrate the reporter and interpreter level skills learned from their previous clinical experiences, and integrate skills from the manager level at least 50 percent of the time. As part of this course students will attend a weekly case conference with colleagues in which cases will be presented and discussed. Prerequisite: GC7520.

GC 7530. Genetic Counseling Practicum 4. Genetic Counseling Practicum 4 is the last part of a Genetic Counseling Practicum series that provides students the opportunity to integrate knowledge, skills and attitudes (KSA’s) of genetic counseling in a clinical setting. This series utilizes the RIME framework (Reporter, Interpreter, Manager, Educator), which is a framework used frequently in medical education to set expectations for student performance throughout their clinical training. The goal of this course is to consistently demonstrate the reporter, interpreter and manager level skills learned from their previous clinical experiences (GC7510, GC7515, GC7520, GC7525), and integrate skills from the educator level at least 50 percent of the time. As part of this course students will attend a weekly case conference with colleagues in which cases will be presented and discussed. Prerequisite: GC7520.

GC 7600. Clinical Reflection and Self-Awareness. First-year M.G.C. students will meet as a group in the fall and spring semesters for group supervision. The weekly one-hour sessions will be moderated by a counseling professional who is independent of the M.G.C. program. Transition to more peer-directed conversations will be encouraged as students advance through the program. Some of the topics to be covered include self-awareness, self-care and coping skills, setting boundaries, and life
transitions. Sessions will be confidential, and attendance will be the only requirement for this pass/fail class.

**GC 7610. Clinical Reflection and Self-Awareness.** Second-year M.G.C. students will meet as a group in the fall and spring semesters for group supervision. The weekly one-hour sessions will be moderated by a counseling professional who is independent of the M.G.C. program. Transition to more peer-directed conversations will be encouraged as students advance through the program. Skills introduced in GC 7600 will be practiced and layered with topics of life management through self-care, professional burnout in a helping profession, understanding one’s role in the health care team, and finding a professional self. Sessions will be confidential, and attendance will be the only requirement for this pass/fail class. Prerequisite: GC 7600.

**GC 7999. Genetic Counseling Master’s Thesis.** Completion of a mentored research project is a required component of the MGC program. The research project is driven by the interests of the individual student supported by the program faculty and/or clinical supervisors. The research must focus on a question related to the practice of genetic counseling from the patient and/or provider perspective. This course is graded pass/fail.
Faculty

Anesthesiology

CHAIR Warren S. Sandberg
PROFESSORS EMERITI M. Lawrence Berman, John J. Franks, Bradley E. Smith
RESEARCH PROFESSORS Frank Emmanuel Block, Daniel J. France
ADJUNCT PROFESSORS Jayant K. Deshpande, Jayakumar R. Kambam
RESEARCH ASSOCIATE PROFESSOR Jason M. Slagle
ADJUNCT ASSOCIATE PROFESSORS David D. Affery, Kevin P. M. Currie, Benjamin W. Johnson
ASSOCIATE CLINICAL PROFESSOR Ramachander K. Pai
RESEARCH ASSISTANT PROFESSORS Shilo Anders, Carrie A. Grueter
ADJUNCT ASSISTANT PROFESSORS Julian S. Bick, Claude L. Ferrell, Mudola Vuhandali Manyano, Ashok K. Saha, Geeta P. Wasudev, Jie Xu, Madhu S. Yelameli
ASSISTANT CLINICAL PROFESSORS Vidya N. Rao, Rigoberto L. Sierra-Anderson, Amr Ahmed Waly

Basic Sciences

CHAIR John D. York
PROFESSORS EMERITI Graham F. Carpenter, Stanley Cohen, Carl G. Hellebrquist, Tadashi Inagami, Conrad Wagner, Michael R. Waterman
RESEARCH PROFESSORS Galina I. Lepesheva, Edward T. Olejniczak
ADJUNCT PROFESSORS Rafael Razi, Orlando D. Scharer
ASSOCIATE PROFESSORS Aaron B. Bowman, Lourdes Estrada
VISITING ASSOCIATE PROFESSOR Huing Chen
RESEARCH ASSOCIATE PROFESSORS Raymond L. Menaulgh, Jeremy Lynn Norris, Jonathan H. Sheehan, Jarrod A. Smith, Md. Jashim Uddin
ADJUNCT ASSOCIATE PROFESSORS Alyssa R. Bonine-Summers
ASSISTANT PROFESSORS Manuel Ascano, Raymond D. Blind, James Dewar, Emily C. Hodges, Lauren Parker Jackson, Andrew J. Link, Carlos F. Lopez, Adrian Olivares, Yi Ren, Marija Zanic
RESEARCH ASSISTANT PROFESSORS Joshua A. Bauer, M. Wade Calcutt, James J Galligan, Danielle Gutierrez, Joel M. Harp, Taekyu Lee, Brian D. Lehmann, W. Hayes McDonald, Pradeep Sunny Pallan, Jason Phan, Michelle L. Reyzer, Kristie M. Rose, Jeffrey M. Sparagins, Kristy Stengel, Darren R. Tyson, Anna Vinson, Zhen Wang, Yihu Xie
ADJUNCT ASSISTANT PROFESSORS Dale Shannon Comett, Steven M. Damo, Joseph Edward Deweese, Nicholas J. Reiter, Raf Van de Plas
RESEARCH INSTRUCTORS Mostafa Bekrati, Shilpa Sampath

Biomedical Informatics

CHAIR Kevin B. Johnson
PROFESSOR EMERITUS Edward K. Shultz
Cardiac Surgery

CHAIR Ashish Shah
PROFESSORS EMERITI Harvey W. Bender, William S. Stoney
PROFESSORS David P. Bichell, Walter H. Merrill, Michael R. Petracek, Ashish Shah
ADJUNCT PROFESSOR William H. Frist
ASSOCIATE PROFESSOR Karla G. Christian
ASSISTANT PROFESSORS Tarek S. Abis, Keki R. Balsara, Ben Barton, Matthew R. Danter, Clayton A. Kaiser, Melissa Marie Levack, Brett Allen Mettler
INSTRUCTOR Daniiele Gottlieb Sen

Cell and Developmental Biology

CHAIR Ian G. Macara
PROFESSORS EMERITI Alvin M. Burt, Arthur F. Dalley, Steven K. Hanks, James A. McKimna, Jeanette J. Norden, Gary E. Olson
ASSOCIATE PROFESSORS Julie A. Bastarache, Sabine Fuhrmann, Guoziang Gu, Antonis K. Hatzopoulos, Charles C. Hong, Patrick J. Hu, Anne K. Kenworthy, Ela W. Knapak, Deborah A. Larrigan, Susan M. Krisinski Majka, Andrea Page-McCaw, Linda J. Sealy, E. Michelle Southard-Smith, Lisa R. Young, Pamppee Paul Young, Sandra S. Zinkel
RESEARCH ASSOCIATE PROFESSOR Anna L. Means
ASSISTANT PROFESSORS Gautam Bhave, Craig R. Brooks, Dylan T. Burnette, Rebecca S. Muraoka Cock, Vivian Gama, Leslie Stuart Gewin, Rebecca A. Ihrie, Jonathan M. Irish, Ken Lau, Jason MacGurn, Young-Jae Nam, Jared Nordman, Mauilk R. Patel, Marija Zanic
RESEARCH ASSISTANT PROFESSORS Janel Renee Beckley, Jeffrey L. Franklin, Bryant Millis, Jenny C. Schafer, Bong Hwan Sung, Lance R. Thomas
ADJUNCT ASSISTANT PROFESSOR Brian Neilm

Dermatology

PROFESSORS Alan S. Boyd, Mary Margaret Chren, Darrel L. Ellis, Jo-David Fine, Lloyd E. King, Ann Richmond, John A. Zic
ADJUNCT PROFESSOR John P. Sundberg
ASSOCIATE PROFESSOR Jeffrey David Byers
VISITING ASSOCIATE PROFESSOR Arved Vain
ASSOCIATE CLINICAL PROFESSORS James P. Fields, Michael Lee Smith
ASSISTANT PROFESSORS Sharon Elizabeth Albers, Rachel Wergin Champion, Anna S. Clayton, Anna K. Dewan, Allison Hanlon, Michel A. McDonald, Jami L. Miller, Sally H. Monahan, William G. Stubbins, Eric Robert Tkaczczk, Jeffrey P. Zwener
RESEARCH ASSISTANT PROFESSOR Shirley Brody Russell
ADJUNCT ASSISTANT PROFESSORS Diane S. Keeney, Monica Ledoux
ASSISTANT CLINICAL PROFESSORS Benjamin B. Hayes, David H. Horowitz, Jennifer J. Lee, Alvin H. Meyer, Ronald A. Nelson, Christopher W. Robb, Jason B. Robbins
Emergency Medicine

CHAIR Corey M. Slovis
PROFESSORS Sean P. Collins, Donna L. Seger, Corey M. Slovis, Lawrence B. Stack, Keith D. Wrenn
VISITING PROFESSOR Greg L. Henry
ADJUNCT PROFESSORS John G. Benitez, Seth W. Wright
ADJUNCT ASSOCIATE PROFESSOR Gary R. Schwartz
ADJUNCT ASSISTANT PROFESSOR Zulfikar Bux
ADJUNCT CLINICAL PROFESSORS Scott MacPherson Bradley, David W. Lawhorn, Vivian Lei, Geoffrey D. Lifferty, Marc A. Mickiewicz, J. Raymond Pinkston, Michelle Walther
SENIOR ASSOCIATES R. Kevin High, Karen F. Miller
ASSOCIATE G. Joaquin Toon
INSTRUCTORS Shevna D. Bellow, Jamie Renee Cirbus, Jeffrey Norris Heimiller, Mary Kate Jordan, Joseph Michael Reardon, Karan Samir Shah, Austin Smith
CLINICAL INSTRUCTORS Judy Jean Chapman, Aubrey Michael Delk, Edmund Dabney Hadley, Jill E. Lawton Heavrin, David L. Lanier, James Parrell

Health Policy

CHAIR Melinda Jean Buntin
ADJUNCT PROFESSORS Michael D. Decker, Bruce Jennings, Wayne Joseph Riley
CLINICAL PROFESSOR Timothy F. Jones
ADJUNCT ASSOCIATE PROFESSOR Bruce G. Gellin
ASSOCIATE CLINICAL PROFESSORS Allen Scott Craig, Abelauro C. Moncayo
ASSISTANT PROFESSORS Carolyn Audet, Jordan Everson, Gilbert Gonzales, John A. Graves, Laura M. Keohane, Tara McKay, Sayeh Sander Nipay, Stephen W. Patrick, Matthew J. Resnick, Michael R. Richards, Mary I. Yarbrough
RESEARCH ASSISTANT PROFESSORS Kathleen Marie Breisford, Tiffanie Markus, Marie H. Martin, Christine C. Whitmore
ADJUNCT ASSISTANT PROFESSORS Kimberly R. Glenn, Mukhtar Y. Muhammad

Hearing and Speech Sciences

CHAIR Anne Marie Tharpe
PROFESSORS EMERITI Edward G. Conture, D. Wesley Grantham, Judith A. Rassl, R. Edward Stone, Robert T. Wertz
RESEARCH PROFESSOR Paul J. Yoder
ADJUNCT PROFESSOR Renee Marie Brown
RESEARCH ASSOCIATE PROFESSOR Alexandra F. Key
ADJUNCT ASSOCIATE PROFESSORS Devin L. McCaslin, Micah M. Murray
ADJOINT ASSOCIATE PROFESSOR Nathalie L. Maitre
RESEARCH ASSISTANT PROFESSORS Erin M. Picou, Hatun Zengin-Bolatikale
ADJUNCT ASSOCIATE PROFESSORS Patricia Flynn Allen, Linda L. Auther, Lisa Anne de la Mothe, Andrew Dittberner, Kiara Anne Ebingen, Mia A. Lee Rosenfeld, Scott Wright
ADJOINT ASSISTANT PROFESSOR Anthony J. Spahr

Medical Education and Administration (VU)

CHAIR Robert E. Gilbertson, Bonnie Miller, Cathleen C. Pettipher
ADJUNCT PROFESSOR Glenn W. Davidson
ADJUNCT PROFESSORS Alan R. Bentley, Elizabeth A. Bowman, Ashley Brady, Heather A. Davidson, Michelle S. Grundy, Kimberly A. Petrie, Ann H. Price
INSTRUCTOR Luke R. Finn

ASSISTANT CLINICAL PROFESSORS John R. Dunn, Marion A. Kainer, Kelly Lynn Moore, William S. Paul
ASSOCIATE Catherine Melinda Hammack
INSTRUCTOR Justin Matthew Bachmann
RESEARCH INSTRUCTORS Erika T.A. Leslie, Jea Young Min
CLINICAL INSTRUCTOR Julia Brennan
Medical Education and Administration (VUMC)

PROFESSORS EMERITI Gerald S. Grotzer, George C. Hill, Frederick Kirchner
PROFESSORS Donald W. Brady, Charlene M. Dewey, Quentin Gavin Eichbaum, Gerald B. Hickson, Kimberly D. Lomis, Donald E. Moore, Lillian B. Nanney, John S. Perr, James W. Pichert, David S. Raloff, Matthew Bret Weiner
ADJUNCT PROFESSOR John Steven Halle
ASSOCIATE PROFESSORS Arna Banerjee, Thomas F. Catron, Amy E. Fleming, Julie K. Hudson
ASSISTANT PROFESSORS Yvonne A. Joosteen, John F. Manning, Ilene N. Moore, Lynn E. Webb

Medicine

CHAIR Nancy J. Brown


ASSOCIATE CLINICAL PROFESSORS Phillip D. Bertram, James R. Cato, Richard P. Schneider, Harrison J. Shull
Molecular Physiology and Biophysics
Neurological Surgery

CHAIR Reid C. Thompson
PROFESSORS EMERITI George S. Allen, J. Michael Fitzpatrick, Robert L. Galloway
ADJUNCT PROFESSOR Stephen M. Oppenheimer
CLINICAL PROFESSOR Anthony L. Asher
ASSOCIATE PROFESSORS John Allan Barwise, Andrew J. M. Gregory, Elizabeth Haley Vance, John Spooner
ASSOCIATE PROFESSORS Scott Crawford Standard, David A. Edwards, Darío J. Englert, Michael T. Froyer, Matthew Robert Fusco, Rebecca A. Ihrie, Truc Minh Le, Robert P. Nafte1, Scott L. Parker, Mayur B. Patel, Alejandro Campos Rivas, Jacob Patrick Schwarz, Hamid M. Shah, Byron F. Stephens, Kyle Derek Weaver, Robert J. Webster, Hong Yu
RESEARCH ASSOCIATE PROFESSORS Aqeela Afzal, Pierre Francois D’Haese
ADJUNCT ASSOCIATE PROFESSORS Scott Crawford Standard, David J. Vigerust, Jiali Wang
ASSISTANT CLINICAL PROFESSOR John Spooner
ASSOCIATE Elizabeth Haley Vance
INSTRUCTOR Rushna Pervez Ali
ADJUNCT INSTRUCTOR Stephanie M. Murphy

Neurology

CHAIR Dane Michael Chetkovich
PROFESSORS EMERITI Gerald M. Fenichel, Frank R. Freemont, John S. Warner, Ronald G. Wiley
CLINICAL PROFESSOR Karl E. Misulis
RESEARCH ASSOCIATE PROFESSOR Ye Han
ADJUNCT ASSOCIATE PROFESSOR Pradumna Pratap Singh
RESEARCH ASSISTANT PROFESSORS Patricia A. Conniskey, Mallory Hacker, Chandramohan Natarajan, Aurea F. Pimenta, Shimian Qu, Nelleke van Wouwe, Chengwen Zhou
ADJUNCT ASSISTANT PROFESSOR Nandakumar Bangalore Vittal
ASSISTANT CLINICAL PROFESSORS Jan Lewis Brandes, Mary Ellen Clinton, George R. Lee, Barbara J. Olson, Subir Prasad, Martin H. Wagner, Shan-Ren Zhou
INSTRUCTORS Laura B. Coulam, Adham Nagy, Kisha Janelle Young
RESEARCH INSTRUCTOR Bo Hu
ADJUNCT INSTRUCTORS Kreig D. Roof, Olivia J. Veatch

Obstetrics and Gynecology

CHAIR Dane Michael Chetkovich
PROFESSORS EMERITI Benjamin Danzo, Esther Eisenberg, Stephen S. Entman, Marie-Claire Orgebin-Crist, Daulat R. Tusiliani
ADJUNCT PROFESSORS Damaris M. Olagundoye
CLINICAL PROFESSORS Cornelia R. Graves, William H. Kutteh, Frank Wen-Yung Ling, Salvatore J. Lombardi, Thomas G. Stovall, Robert Layman Summitt
RESEARCH ASSISTANT PROFESSORS Tianbing Ding, Andrew J. Wilson
SENIOR ASSOCIATES Susan B. Drummond, Martha Shaw Dudek, Jill R. Slamon
ASSOCIATES Nan Gentry, Caitlin M. Grabarits, Carol A. Griffin, Anna T. Kirk, Lisa D. Milam, Susan R Saunders, Angela F. Sims Evans
INSTRUCTORS Cynthia Arviso, Laura E. Cedo Cintron, Ali Sevilla de Cocco, Amy Beth Graves, Meghan Hendrickson, Linda L. Johnson, Valerie L. Nunley, Patricia Mae Engel Overcash
RESEARCH INSTRUCTORS Steven M. Brunswasser
Ophthalmology and Visual Sciences

CHAIR Paul Sternberg
CLINICAL PROFESSORS John E. Downing, Ralph E. Wesley
ASSOCIATE PROFESSORS TyWilliam Abel, Nancy Mayer Benegas, Milam A. Brantley, Edward F. Cherney, James W. Felch, Sabine Fuhrmann, Karla J. Johns, Jeffrey A. Kammer, Rachel Kuchty, David G. Morrison, Tonia S. Rex, Rebecca M. Sappington-Calkins, Seth A. Smith, Uyen L. Tran, Laura L. Wayman, Daniel S. Weikert, Geoffery F. Woodman, Yaqiong Xu
RESEARCH ASSOCIATE PROFESSOR John G. Kuchty
RESEARCH ASSOCIATE PROFESSOR Jin-Hui Shen
ADJOINT ASSISTANT PROFESSORS Ashwath Jayagopal
ASSISTANT CLINICAL PROFESSORS Brian Stuart Biesman, Lucas Lee Groves, Sahar Kohanim, Bina Patel, Angele N. Payne, Deborah D. Sherman, Robbin B. Sinatra
INSTRUCTORS Alia K Durrani, Collin Douglas Hair, Stephanie Jian, Tomas Alejandro Moreno, Laura L. Snyder
RESEARCH INSTRUCTOR MD Imam Uddin
CLINICAL INSTRUCTORS George N. Cheij, Kimberly A. Klippenstein

Orthopaedic Surgery and Rehabilitation

CHAIR Herbert S. Schwartz
PROFESSOR EMERITUS Dan M. Spengler
CLINICAL PROFESSOR J. Thomas W. Byrd
ADJUNCT ASSOCIATE PROFESSORS Clinton J. Devin, Michael L. Voight
ADJUNCT CLINICAL PROFESSORS Michael J. Christie, Michael J. McHugh
RESEARCH ASSISTANT PROFESSORS Rogelio A. Coronado, Satoru Egawa, Jacqueline Sue Penning
ADJUNCT ASSISTANT PROFESSOR Robert B. Snyder
ASSISTANT CLINICAL PROFESSORS Muhammad Ajmal, Mark R. Christophersen, Philip Gerlach Coogan
SENIOR ASSOCIATES Carolyn S. Aubrey, Adam Hicks, Laura J. Huston, David B. Triemer
ASSOCIATES Lauren Kelley Braue, Kirby Hudson Deeter, Michael Francis Eagle, Daniel W. Enroth, Reagan Hall, Greer Mahoney Henry, Melissa K. Lasater, Jonathan S. Riggs
INSTRUCTORS Cesar M. Cereijo, Ashlee LaFontaine, Vincent William Prusick, Kurt Alexander Yusi
ASSISTANTS Kyle Brooks, Meghan Hayes, Vanessa Lo, Molly C. Muecke

Oral & Maxillofacial Surgery

CHAIR Samuel J. McKenna
PROFESSOR Samuel J. McKenna
ASSOCIATE PROFESSOR Luis Vega
ASSOCIATE CLINICAL PROFESSORS James D. Allen, John R. Werther
ASSISTANT PROFESSORS Tyler Ames, Julie H. Hull, Susie Lin, Julie Wang Raze
RESEARCH INSTRUCTOR Derek K. Smith
**Otolaryngology**

CHAIR Roland D. Eavey

PROFESSORS EMERITI James A. Duncavage, R. Edward Stone


ASSOCIATE PROFESSORS Marc L. Bennett, Alexander H. Gelbard, Barbara H. Jacobson, Young Jun Kim, Alexander J. Langerman, Haoxiang Luo, Alejandro Campos Rivas, Bernard Rousseau, Paul T. Russell, Robert J. Sinard, Justin Harris Turner, Robert J. Webster, Christopher T. Wootten

ADJUNCT ASSOCIATE PROFESSORS Steven L. Goudy, Lou Reinisch


RESEARCH ASSISTANT PROFESSORS Hanbing An, Shan Huang, RESEARCH INSTRUCTOR Miriam D. Lense

CLINICAL INSTRUCTORS Samuel S. Becker, G. Lee Bryant


RESEARCH ASSOCIATE PROFESSORS Ingrid M. Verhamme, Lan Wu

ASSOCIATE CLINICAL PROFESSOR John E. Wright


RESEARCH ASSOCIATE PROFESSORS Shanna Alexandria Arnold, Sung Hoon Cho, S. Kent Dickeson, Melissa A. Farrow, Sarika Saraswati, Jing Zhou

ADJUNCT ASSOCIATE PROFESSOR Wilson Pereira Silva

ASSISTANT CLINICAL PROFESSORS Deborah O. Crowe, Thomas A. Deering, Samuel H. DeMent, Miguel A. Laboy, Feng Li, Claire E. Meena-Leist, Robert N. Page

ASSOCIATES Maralie G. Exton, Bruce W. Greig

ASSISTANT CLINICAL PROFESSORS Won Jae Huh, Meghan E Kapp, Allison Marie Wasserman

RESEARCH INSTRUCTORS Matthew E Bechard, Heather K. Kroh, Damian Maseda, Haichun Yang

**Pathology, Microbiology, and Immunology**

CHAIR Samuel A. Santoro


ADJUNCT PROFESSORS Omar Hameed, Martin C. Mith, Pamppee Paul Young

CLINICAL PROFESSOR Edward P. Fody


RESEARCH ASSOCIATE PROFESSORS Ingrid M. Verhamme, Lan Wu

ASSOCIATE CLINICAL PROFESSOR John E. Wright


RESEARCH ASSOCIATE PROFESSORS Shanna Alexandria Arnold, Sung Hoon Cho, S. Kent Dickeson, Melissa A. Farrow, Sarika Saraswati, Jing Zhou

ADJUNCT ASSOCIATE PROFESSOR Wilson Pereira Silva

ASSISTANT CLINICAL PROFESSORS Deborah O. Crowe, Thomas A. Deering, Samuel H. DeMent, Miguel A. Laboy, Feng Li, Claire E. Meena-Leist, Robert N. Page

ASSOCIATES Maralie G. Exton, Bruce W. Greig

ASSISTANT CLINICAL PROFESSORS Won Jae Huh, Meghan E Kapp, Allison Marie Wasserman

RESEARCH INSTRUCTORS Matthew E Bechard, Heather K. Kroh, Damian Maseda, Haichun Yang

**Pediatrics**

CHAIR Steven A. Webber

PROFESSORS EMERITI Ian M. Burr, Thomas P. Graham, John W. Greene, John P. Greer, lekuni Ichikawa, Alexander R. Lawton, Jayant P. Shenai, Hakon W. Sundell, Jan Van Eys

PROFESSORS Sari A. Acra, Mark C. Adams, Donald H. Arnold, Scott Baldwin, Shari L. Barkin, Joey V. Barnett, John W. Brock, Dai H. Chung, Ellen Wright Clayton, Bruce E. Compas, William O. Cooper, James E. Crowe, Laurie E. Cutting, Michael Rutledge DeBaun, Mark R. Denison, M. Sheila Desmond, Willian Michael DeVoe, Debra A. Dodd, Brian S. Donahue, Sean P. Donahue, Elisabeth May Dykens,

RESEARCH ASSISTANT PROFESSORS Margaret A Adgent, Hyehun Choi, Hongwei Dong, Natalia Jimenez-Truce, Ardinia J. Prijulisers, Al-Dong Qi, Jeffrey C. Rohrbaugh

ADJUNCT ASSISTANT PROFESSORS Kyle B. Brothers, Mary-Margaret Gannon, Anne Fill, Sabina B. Gesell, Luzaro Gonzalez Calvo, Romina P. Libbester, Kalpana Manthiram, Christopher John Prendergast, Michele D. Spring, Michael Dale Warren


RESEARCH INSTRUCTORS Hannah Hyejeong Lee, Haichun Yang

ADJUNCT INSTRUCTOR Kimberlee D. Wyche-Etheredge


Pharmacology

CHAIR J. David Sweet

PROFESSORS EMERITI Wolf-Dietrich Dettbarn, Joel G. Hardman, Erwin J. Landon, Peter W. Reed, L. Jackson Roberts, Elaine Sanders-Bush, Jack N. Wells


RESEARCH PROFESSIONS J. Oliver McIntyre, Harold L. Moses, Colleen M. Niewender, Tao Yang

ADJUNCT PROFESSIONS Randy D. Blakely, Sakina Eltoma, Lee E. Limbird, Lynn M. Matarina, Martin L. Olgrette, Margaret M. Whalen

ASSOCIATE PROFESSIONS Sean S. Davies, Jerod Scott Denton, Igor A. Feoktistov, Barbara Mary Fingleton, Eugenia V. Gurevich, Charles C. Hong, Jing-Qiong Kang, James M. Luther, Michael J. Mcclean, Jens Meiler, William David Merryman, Paul E. Moore, Sachin Patel, Rebecca M. Sappington-Calkins, Claus Schneider, Bh-Hwa Shieh, Benjamin W. Spiller, Brian E. Wadzinski, C. David Weaver, Matthew H. Wilson, Fiona E. Yull

RESEARCH ASSOCIATE PROFESSIONS Olivier G. Boutaud, Ginger Lohrine Mina, Alex G. Waterson

ADJUNCT ASSOCIATE PROFESSIONS Wendell S. Akers, Chang Yong Chung, John Scott Daniels, Richard Joseph Gumina, Christine Saunders, Byongwoon Song, Xiaofei Wang


RESEARCH ASSISTANT PROFESSIONS Christopher Brian Brown, Rachel Denise Crouch, R. Nathan Daniels, Hugh M. Fentress, Klarissa D. Hardy, Glennroy Dean A. Martin, Susan L. Mercer, Dayanidhi Raman, Saumya Ramanathan, Shan R. Stauffer, Venkataswarup Tiruveddi INSTRUCTORS Kendra Helen Oliver, Alice L. Rodriguez

VANDERBILT UNIVERSITY
Physical Medicine and Rehabilitation

CHAIR David James Kennedy
PROFESSORS Michael Goldfarb, David James Kennedy
ASSOCIATE PROFESSORS Thomas E. Groomes, Nitin B. Jain, Jeffery Scott Johns, Kristin Archer Swygert, David R. Vago, Ruth Quillian Wolever
ASSOCIATE CLINICAL PROFESSORS Rajasekhar V. Kandala
RESEARCH ASSISTANT PROFESSOR Paula Donahue
ASSISTANT CLINICAL PROFESSOR William J. L. Newton

Plastic Surgery

CHAIR Galen Perdikis
PROFESSOR EMERITA Lillian B. Nanney
PROFESSOR Galen Perdikis
ADJUNCT PROFESSORS R. Bruce Shack
ASSOCIATE PROFESSORS Kent K. Higdon, Kevin J. Kelly, Wesley P. Thayer, Douglas R. Weikert
ASSOCIATE CLINICAL PROFESSORS Jack Fisher
ASSISTANT PROFESSORS Christopher M. Bonfield, Stephane Alain Braun, Brian C. Drolet, J. Blair Summitt, Julian Winocour

Preventive Medicine

Psychiatry and Behavioral Sciences

CHAIR Stephan Heckers
ADJUNCT PROFESSORS Herbert Y. Meltzer, Steven S. Sharfstein
CLINICAL PROFESSORS David Barton, Robert O. Begtrup, Jeffrey L. Binder, Rudra Prakash, John L. Shuster, S. Steve Snow
VISITING ASSOCIATE PROFESSOR Shin-Gyeom Kim
RESEARCH ASSOCIATE PROFESSORS James C. Jackson, Alexandra F. Key, Baxter P. Rogers
ADJUNCT ASSOCIATE PROFESSORS Kevin B. Sanders, Rebecca June Selove
ASSOCIATE CLINICAL PROFESSOR Karen H. Rhea
ASSISTANT CLINICAL PROFESSORS Sarah B. Aylor, Michael J. Baron, Lynn P. Barton, Sharone Elizabeth Franco Barwise, Elizabeth A. Baxter, Amy R. Best, Corey D. Campbell, Thomas W. Campbell, Natalie Campo, Philip Charin, Michelle Macht Cochran, Carlton W. Cornett, Jill DeBona, Anjani Dharmodharan, Michael J. Ferr, Sharon M. Gordon, Vicki S. Harris, Catherine Gallarian Harrington, Nara Granja Ingram, Rissa Pryse Ivens, Kathryn Eckstein Jalovec, Jennifer Kasey, William D. Kenner, Heather Kreth, Nancy Lane, Thomas J. Lavie, Nasreen Mallik, Carol Proops Milam, Monicah Muhumwa, Erin Pat, David K. Patzer, Tanya Porashka, Susanna Leigh Quaem, Marsha Robertson, Jessica Samples, Abhinav Saxena, Angela D. Shields, Valerie Smith-Gamble, Max Spadera, Stephanie Vaughn, Dana Deaton Verner, W. Scott West, Brad V. Williams, Nancy Yoanidis, David Nathan Young, Mi Yu
SENIOR ASSOCIATES Elise D. McMillan, Karen L. Starr
ASSOCIATES Emma Finan, Michelle Foote-Pearce, Helen E. Hatfield, Lynne L. McFarland, Jennifer A. Scroggie, Timothy W. Stambaugh
RESEARCH INSTRUCTORS Maureen McHugo
Radiation Oncology

CHAIR Lisa A. Kachnic
PROFESSOR EMERITUS Charles W. Coffey
PROFESSORS Emeritus Anuradha Bapni Chakravarthy, Anthony J. Cmelak, George X. Ding, Michael L. Freeman, Lisa A. Kachnic
RESEARCH PROFESSOR Sekdar R. Konjeti
ADJUNCT PROFESSOR Arnold W. Malcolm
ASSOCIATE PROFESSORS Michael J. Price, Eric Tatsuo Shinhara
ADJUNCT ASSISTANT PROFESSOR Quincy A. Quick
ADJUNCT INSTRUCTOR John J. Walsh

Radiology and Radiological Sciences

CHAIR Reed A. Ormey
PROFESSORS EMERITI Frank E. Carroll, Thomas S. Dina, J. Michael Fitzpatrick, Richard M. Heller, Sandra Kirchner, E. Paul Nance, C. Leon Partain, W. Faxon Payne, Stephanie E. Spottwood
RESEARCH PROFESSORS A. Bertrand Britt, J. Oliver McIntyre
ADJUNCT PROFESSORS Aravind Arepalli, Anna Wang Roe
ASSOCIATE PROFESSORS Richard G. Abramson, Asma Ahmad, Aravind Arepalli, Anna Wang Roe
ADJUNCT ASSISTANT PROFESSOR Arnold W. Malcolm
ASSOCIATE PROFESSORS Michael J. Price, Eric Tatsuo Shinhara
ADJUNCT ASSISTANT PROFESSOR Quincy A. Quick
ADJUNCT INSTRUCTOR John J. Walsh

Surgery

CHAIR R. Daniel Beauchamp, Seth J. Karp
RESEARCH PROFESSORS Irene D. Feurer, Phillip E. Williams, Edward Y. Zavala
ADJUNCT PROFESSORS Wael El-Rifai, Douglas W. Hanto, William L. Russell
CLINICAL PROFESSOR Joseph L. Mulherin
RESEARCH ASSOCIATE PROFESSORS Joyce Cheung-Flynn, Padmini Komalavilas, Anna L. Means, Joseph T. E. Roland
ADJUNCT ASSOCIATE PROFESSORS Amosy E. M’Koma, Alexander Zaika
ASSOCIATE CLINICAL PROFESSORS David Alan Baker, Roger A. Bonau, William H. Edwards, Raymond S. Martin, Stanley O. Snyder

Krupa Patel-Lippmann, Amanda Nelson Raghe, John D. Ross, Kim Sandler, Brent Vernon Savoie, Chirayu Shah, Lucy B. Spalluto, David S. Taber, Jennifer R. Williams, Curtis A. Wushenak, Junzhong Xu
RESEARCH ASSISTANT PROFESSORS Allen Timothy Newton, Saikat T Sengupta, Roman V. Shchevin, David Samuel Smith, Mohammed N. Tantawy, Zhongliang Zu
ADJUNCT ASSISTANT PROFESSOR Theodore F. Towse
ADJOINT ASSISTANT PROFESSOR John M. Viroskto
ASSOCIATES Jeneth Aquino, Alexis Bartley Paulson
RESEARCH INSTRUCTORS Rachelle Crescenzi, Muwei Li, Michael L. Nickels, Michael L. Schulte, Ping Wang, Xinjiang Yan, Pai-Feng Yang
ADJUNCT INSTRUCTOR Hamed Mojahezd
ASSISTANTS Tracey L. Goddard, Sarah D. Valenti

VANDERBILT UNIVERSITY
RESEARCH ASSISTANT PROFESSORS L. Alan Bradshaw, Kyle M. Hocking, Lynne A. LaPierre, Ryota Masuzaki  
ADJUNCT ASSISTANT PROFESSORS Lao K. Cheng, Ki Taek Nam, Sandeep Anantha Sathyanarayana  
SENIOR ASSOCIATE Carolyn S. Watts  
INSTRUCTORS Bracken Abram Armstrong, Seth A. Bellister, Richard David Betzold, Aaron Bolduc, Jill Richman Streams, Stephanie Lise Warren  
RESEARCH INSTRUCTORS Jun Hong, Izumi Kaj, Elena A. Kolobova, Pallavi Mannal, Susseela Somarajan, Sinju Sundaresan  
ADJUNCT INSTRUCTOR Margaret J. Tarpley  
CLINICAL INSTRUCTORS Luda Davies, Ray Hargreaves, Deonna Moore, John Kennedy Muma Nyagetuba

**Thoracic Surgery**

**INTERIM CHAIR** Jonathan C. Nesbitt  
**PROFESSORS** Jonathan C. Nesbitt  
**ASSOCIATE PROFESSORS** Eric L. Grogan, Eric S. K. Lambright, Fabien Maldonado, Otis B. Rickman

**Urologic Surgery**

**CHAIR** David F. Penson  
**PROFESSORS** Mark C. Adams, John W. Brock, Sam S. Chang, Roger R. Dmochowski, S. Duke Harrell, Robert J. Matusik, Steven G. Merante, David F. Penson, John C. Pope, Joseph A. Smith  
**ASSOCIATE PROFESSORS** Daniel A. Barocas, Douglass B. Clayton, Melissa R. Kaufman, Douglas F. Millam, Nicole L. Miller, William Stuart Reynolds, Stacy T. Taniaka, John C. Thomas, Robert J. Webster  
**ASSOCIATE CLINICAL PROFESSORS** Charles W. Eckstein, Robert A. Sewell  
**ASSISTANT PROFESSORS** Maria Hadjifrangiskou, Ryan S Hsi, Kirk A. Keegan, Kelvin A. Moses, Matthew J. Resnick, Kristen R. Scarpato, Cary W. Stimson  
**RESEARCH ASSISTANT PROFESSOR** Ren Je Jin  
**ASSISTANT CLINICAL PROFESSORS** Raoul S. Concepcion, Mark D. Flora, Gautam Jayram, Whitson Lowe  
**ASSOCIATE** Julieanne B. Hutchison  
**INSTRUCTORS** Jacob Tyler Ark, Smita De, Joseph Kuebker, Aaron Alan Laviana, Daniel J Lee, Jennifer Ayesha Robles

**Faculty**

MATTHEW J. ABBATE, Assistant Professor of Clinical Medicine  
B.A. (Brown 1987); M.D. (Tufts 1991) [1995]  
KHALED ABOEL-KADER, Assistant Professor of Medicine  
B.A. (Saint Louis 1998); M.D. (Robert Wood Johnson Medical, New Brunswick 2002); M.S. (Pittsburgh 2009) [2013]  
TY WILLIAM ABEL, Associate Professor of Pathology, Microbiology and Immunology; Associate Professor of Ophthalmology and Visual Sciences  
VIRGINIA D. ABERNETHY, Professor of Psychiatry, Emerita  
BASSEL W. ABOU-KHALIL, Professor of Neurology  
RIMA N. ABOU-KHALIL, Assistant Professor of Clinical Hearing and Speech Sciences  
ROBERT L. ABRAMAH, Assistant Professor of Medicine  
B.A. (Dartmouth 1985); M.D. (Medical College of Georgia 2000) [2008]  
RICHARD G. ABRAMSON, Associate Professor of Radiology and Radiological Sciences  
VANDANA G. ABRAMSON, Associate Professor of Medicine  
B.A. (California, Berkeley 1996); M.D. (Chicago 2000) [2009]  
TAREK S. ABSI, Assistant Professor of Cardiac Surgery  
AHMAD ABBAD, Assistant Professor of Clinical Medicine  
NAJ A. ABUMRAD, John L. Sawyers Chair in Surgical Sciences; Professor of Surgery  
LEALANI M.Y. ACOSTA, Assistant Professor of Neurology  
SARI A. ACRA, Professor of Clinical Pediatrics; Director, Division of Pediatric Gastroenterology  
RONY A. ADAM, Professor of Clinical Obstetrics and Gynecology  
B.S. (Maryland 1987); M.D. (Maryland, Baltimore 1991) [2013]  
ALLISON LOTT ADAMS, Instructor in Clinical Medicine; Instructor in Clinical Pediatrics  
B.S. (Samford 2008); M.D. (South Alabama 2012) [2016]  
DAWN WIESE ADAMS, Assistant Professor of Medicine  
GEORGE A. ADAMS, JR., Assistant Clinical Professor of Oral and Maxillofacial Surgery  
B.S. (Southern Methodist 1995); D.M.D. (Kentucky, Lexington 1999) [2004]  
MARK C. ADAMS, Professor of Urologic Surgery; Professor of Pediatrics  
B.A., M.D. (Vanderbilt 1979, 1983) [1995]  
RAEANNA CLAIR ADAMS, Assistant Professor of Surgery  
A.A. (Emmanuel [Georgia] 1995); B.S. (Georgia 1998); M.D. (Mercer 2002) [2009]  
RODNEY S. ADAMS, Associate in Medicine  
A.S.N. (Southern Adventist 1986); B.S.N. (Belmont 2000); M.S.N. (Vanderbilt 2001) [2002]  
SUSAN M. ADAMS, Professor of Nursing; Professor of Psychiatry and Behavioral Sciences  
B.S. (Valparaiso 1972); M.S.N. (California, San Francisco 1977); Ph.D. (Kentucky, Lexington 2007) [1995]
LAUREL V. ALSIENTZER, Clinical Professor of Pediatrics  
B.S.N. (Vanderbilt 1983); M.D. (Pennsylvania State 1987) [1993]  
D. PHILIPS ALTERNBERN, Clinical Instructor in Obstetrics and Gynecology  
B.A. (North Carolina 1984); M.D. (Vanderbilt 1988) [1992]  
LISA A. ALTIERI, Assistant Clinical Professor of Radiology and  
Radiological Sciences  
B.S. (Murray State 1981); M.D. (Louisville 1985) [2012]  
RONALD DAVID ALVAREZ, Betty and Lonnie S. Burnett Chair in  
Obstetrics and Gynecology; Professor of Obstetrics and Gynecology  
B.S., M.D. (Southern Mississippi 1976, 1978); Ph.D., M.D. (Vanderbilt 1985, 1993); MD,PhD [2002]  
WHITNEY MARIE ANDERSON, Assistant in Medicine  
B.A. (Birmingham-Southern 2008); M.S.N. (Vanderbilt 2012) [2017]  
BRUNO DE BEZERRIL ANDRADE, Adjunct Assistant Professor of  
Medicine  
M.D. (2006) [2017]  
ROCHELLE F. ANDREOTTI, Professor of Clinical Radiology and  
Radiological Sciences; Professor of Clinical Obstetrics and  
Gynecology  
B.S., M.D. (Florida 1975, 1978) [2005]  
E. JAMES ANDREWS, JR., Adjunct Associate Professor of Radiology  
and Radiological Sciences  
B.A. (Colorado 1962); M.D. (Florida 1966) [2002]  
WILLIAM A. ANDREWS, Assistant in Anesthesiology  
B.A. (Trevecca Nazarene 2006); M.S.N. (Vanderbilt 2011) [2011]  
JAMES MICHAEL ANDRY, Assistant Professor of Neurology  
B.S. (Saint Mary’s [Texas] 2008); M.D. (Texas, Southwestern Medical  
2012) [2017]  
FEDERICA B. ANGEL, Assistant Professor of Clinical Medicine  
B.A. (Texas 2001); M.D. (Texas Tech University 2008) [2011]  
NARENDER ANAPURREDY, Assistant Professor of Medicine  
Bachelor in Medicine (Osmania [India] 2007) [2014]  
KIM ANNIS, Assistant in Medicine  
B.S. (Wisconsin, Stout 1979); M.S. (Transylvania 1986); B.H.S.  
(Kentucky, Lexington 1996) [2013]  
RACHEL KATHRYN PRICE APPLE, Instructor in Medicine; Instructor in  
Pediatrics  
B.A. (Princeton 2007); M.D. (Vanderbilt 2012) [2016]  
BARBARA A. AQUINO, Clinical Professor of Pediatrics  
JENETH AQUINO, Associate in Radiology and Radiological Sciences  
B.S. (St. Scholastica College [Philippines] 1990); A.D.N. (Aquinas  
College [Tennessee] 1997); B.S.N. (Middle Tennessee State  
2003); M.S.N. (Belmont 2010) [2016]  
AMIR M. ARAFIN, Professor of Neurology  
M.D. (Karachi [Pakistan] 1987); B.S. (Pakistan Community [Saudi  
Arabia] 1994); M.P.H. (Vanderbilt 2009) [2000]  
ARAVIND AREPALLY, Adjunct Professor of Radiology and Radiological  
Sciences  
B.A. (Mercer 1989); M.D. (Emory 1993) [2015]  
MARY ANN THOMPSON ARILDSEN, Associate Professor of Pathology,  
Microbiology and Immunology  
B.S., M.S. (Yale 1977, 1977); Ph.D., M.D. (Pennsylvania 1983,  
1983) [2001]  
RONALD C. ARILDSEN, Associate Professor of Radiology and  
Radiological Sciences  
JACOB TYLER ARK, Instructor in Clinical Urologic Surgery  
B.S. (Wittenberg 2008); M.D. (Vanderbilt 2012) [2017]  
BRACKEN ABRAHAM ARMSTRONG, Instructor in Clinical Surgery  
B.S. (Washington State 2007); M.D. (Georgetown 2011) [2017]  
COLIN ARMSTRONG Assistant Professor of Physical Medicine and  
Rehabilitation; Assistant Professor of Clinical Psychiatry and  
Behavioral Sciences; Psychologist Kim Dayani Center  
B.A. (California State, Bakersfield 1990); Ph.D. (San Diego State  
1998) [2001]  
S. KRISTAN ARMSTRONG, Assistant in Psychiatry and Behavioral  
Sciences  
B.A. (Maryville 2008); M.S.S.W. (Tennessee, Nashville 2013) [2016]  
DONALD H. ARNOLD, Professor of Pediatrics  
B.A., M.D. (Emory 1975, 1979); M.P.H. (Johns Hopkins 2006) [2002]  
SHANNA ALEXANDRIA ARNOLD, Research Assistant Professor of  
Pathology, Microbiology and Immunology  
B.S. (Texas Christian 2003); Ph.D. (Texas, Dallas 2009); M.S.C.I.  
(Vanderbilt 2014) [2014]
GARRETT S. BOOTH, Associate Professor of Pathology, Microbiology and Immunology. B.S. (California, Los Angeles 2000); M.S. (Johns Hopkins 2002); M.D. (Arizona 2007) [2011].

MARK R. BOOTHBY, Professor of Pathology, Microbiology and Immunology; Professor of Medicine. B.S. (Wisconsin 1976); Ph.D., M.D. (Washington University 1983, 1983) [1992].

SETH R. BORDENSTEIN, Associate Professor of Biological Sciences; Associate Professor of Pathology, Microbiology and Immunology. B.S., M.S., Ph.D. (Rochester 1997, 1999, 2002) [2008].


ANTHONY JOSEPH BORGMAAN, Assistant Professor of Clinical Radiology and Radiological Sciences. B.A. (DePauw 2006); M.D. (Indiana, Indianapolis 2011) [2016].

SCOTT C. BORINSTEIN, Scott and Tracie Hamilton Chair in Cancer Survivorship; Associate Professor of Pediatrics. B.S. (Richmond 1994); Ph.D., M.D. (Medical College of Virginia 2002, 2002) [2009].

MARK L. BORN, Assistant Clinical Professor of Radiology and Radiological Sciences. B.A. (Yale 1968); M.D. (Stanford 1972) [2009].

ALEXANDRA J. BORST, Assistant Professor of Pediatrics. B.A. (Pomona 2009); M.D. (Columbia 2010) [2017].


ESWARA C. BOTTA, Assistant Professor of Clinical Anesthesiology. M.B.B.S. (Andhra [India] 1976); M.S. (Madras [India] 1981); M.Ch.E. (Mangalore [India] 1986) [2007].

CATHERINE SIPE BOTTOMS, Clinical Professor of Pediatrics. B.S. (Duke 1997); M.D. (Wake Forest 2010) [2005].

LANA JERADEH BOUSOULIAN, Assistant Professor of Clinical Neurology; Assistant Professor of Clinical Pediatrics. M.D. (Damascus [Syria] 2002) [2012].


CLIFFORD BOWENS, JR., Associate Professor of Clinical Anesthesiology. B.S. (Illinois, Champaign 1986); M.D. (Duke 1993) [2005].

AARON B. BOWMAN, Associate Professor of Pediatrics; Associate Professor of Neurology; Associate Professor of Biochemistry. B.S. (Brigham Young 1993); Ph.D. (California, San Diego 2000) [2006].

ELIZABETH A. BOWMAN, Assistant Professor of Medical Education and Administration (VU); Assistant Director of Medical Education and Administration (VUMC). B.S. (Belmont 2008); Ph.D. (Emory 2008) [2015].

ROBERT H. BOYCE, Assistant Professor of Orthopaedic Surgery and Rehabilitation. B.S. (Auburn 1992); M.D. (Vanderbilt 1996) [2013].

ALAN S. BOYD, Professor of Dermatology; Associate Professor of Pathology, Microbiology and Immunology. B.S. (Abilene Christian 1982); M.D. (Texas, Houston 1986) [1993].

JEREMY S. BOYD, Assistant Professor of Emergency Medicine. B.A. (Rhodes College 2001); M.D. (Brown 2009) [2013].

KELLI LYNN BOYD, Professor of Pathology, Microbiology and Immunology. B.S., D.V.M. (Mississippi State 1993, 1996); Ph.D. (Georgia 2001) [2009].

GARY C. BOYLE, Clinical Instructor in Obstetrics and Gynecology. M.D. (Virginia 1975) [2012].

JILL K. BOYLE, Associate Professor of Clinical Anesthesiology. B.A. (Converse 1977); M.D. (Medical University of South Carolina 1980) [2003].

ANDREA C. BRACIKOWSKI, Associate Professor of Orthopaedic Surgery and Rehabilitation; Associate Professor of Emergency Medicine; Associate Professor of Pediatrics. B.A. (Mount Holyoke 1977); M.D. (SUNY, Buffalo 1981) [1993].

WILLIAM S. BRADHAM, JR., Assistant Professor of Medicine. B.A., M.S., M.D. (South Carolina 1988, 1992, 2003) [2010].

ELISE BALDWIN BRADLEY, Assistant Professor of Clinical Neurology. B.A. (Sonoma State 2003); M.A. (Pepperdine 2006); Ph.D. (2012) [2015].

JOEL F. BRADLEY, JR., Clinical Professor of Pediatrics. B.S. (Davidson 1973); M.D. (Wake Forest 1977) [2001].

MELITA M. BRADLEY, Assistant Clinical Professor of Pediatrics. B.S. (Middle Tennessee State 1991); M.D. (Miami [Florida] 1996) [2007].

SCOTT MACPHERSON BRADLEY, Assistant Clinical Professor of Emergency Medicine. B.A. (California, Berkeley 2001); M.P.H. (Johns Hopkins 2005); M.D. (California, Irvine 2007) [2011].


MARQUES LEVAR BRADSHAW, Associate Professor of Clinical Radiology and Radiological Sciences. B.S. (Morehouse 2000); M.D. (Duke 2004); M.S.C.R (Medical University of South Carolina 2013) [2017].

ASHLEY BRADY, Assistant Professor of Medical Education and Administration (VU). B.A. (Centre 1996); Ph.D. (Vanderbilt 2003) [2014].

CASSANDRA CORINNE BRADY, Assistant Professor of Clinical Pediatrics. B.S. (Indiana, Bloomington 2005); M.D. (Indiana, Indianapolis 2009) [2015].

DONALD W. BRADY, Senior Associate Dean for Graduate Medical Education; Professor of Medicine; Professor of Medical Education and Administration (VUMC). B.A., M.D. (Vanderbilt 1986, 1990) [2007].


JAN LEWIS BRANDES, Assistant Clinical Professor of Neurology. B.S. (Mississippi University for Women 1975); M.S. (Tennessee 1980); M.D. (Vanderbilt 1989) [1993].

STEPHEN J. BRANDT, Professor of Medicine; Professor of Cell and Developmental Biology. B.S. (Duke 1976); M.D. (Emory 1981) [1990].

MILAM A. BRANTLEY, JR., Associate Professor of Ophthalmology and Visual Sciences; Associate Professor of Molecular Physiology and Biophysics. B.A. (Austin College 1988); Ph.D., M.D. (Baylor 1996, 1998) [2010].

DANA M. BRANTLEY-SIEDERS, Assistant Professor of Medicine. B.A. (Maryville 1995); Ph.D. (Vanderbilt 2000) [2003].


LAUREN KELLEY BRAUE, Associate in Orthopaedic Surgery and Rehabilitation. B.S., M.S. (Florida 2009, 2012) [2015].

CHASTITY T. BRAUER, Assistant in Pediatrics. B.N. (Baptist College of Health Sciences 1999); M.S.N. (Tennessee 2000) [2002].

JENNIFER ANN BRAULT, Assistant Professor of Clinical Pediatrics. B.S. (Hillsdale 1997); M.S. (Toledo 2002); M.D. (Indiana, Indianapolis 2006) [2015].


DEBRA BRAUN-COURVILLE, Assistant Professor of Clinical Pediatrics. B.S. (Cornell 1997); M.D. (Yeshiva 2002) [2014].

DANA C. Bray, Assistant in Pediatrics. B.S.N. (Memphis 1996); M.S.N. (Tennessee 1998) [2009].

PETER R. BREAM, JR., Associate Professor of Radiology and Radiological Sciences; Associate Professor of Medicine. B.S. (Davidson 1990); M.D. (North Carolina 1996) [2001].

LORI A. BREAUX, Assistant Clinical Professor of Pediatrics. B.S. (Spelman 1992); M.D. (Meharry Medical 1996) [2000].
KATHLEEN MARIE BRELSFORD, Research Assistant Professor of Health Policy
M.A. (Northern Arizona); B.A. (Miami); M.P.H., Ph.D. (South Florida) [2017]

B. RANDALL BRENN, Associate Professor of Anesthesiology
B.S. (Lewis and Clark 1982); M.D. (Oregon Health and Science 1986) [2017]

JULIA BRENNAN, Clinical Instructor in Health Policy
B.S.N. (Villanova 2000); M.S.S. (California, San Francisco 2007); M.P.H. (Emory 2017) [2017]

KIMBERLY C. BRENNAN, Assistant Professor of Clinical Radiology and Radiological Sciences
B.S. (Indiana, Bloomington 1994); M.D. (Kentucky, Lexington 1998) [2004]

PHILLIP L. BRESSMAN, Clinical Instructor in Obstetrics and Gynecology
B.S. (Oklahoma 1974); M.D. (Vanderbilt 1979) [1983]

MATTHEW D. BRYER, Adjunct Professor of Medicine
B.Sc. (Michigan 1975); M.D. (Harvard 1979) [2008]

RICHARD M. BRYER, Ruth King Scoville Chair in Medicine; Professor of Medicine; Professor of Biochemistry; Professor of Pharmacology
B.S. (Michigan 1978); M.S., Ph.D. (Massachusetts Institute of Technology 1982, 1988) [1991]

PAUL BREZINA, Assistant Clinical Professor of Obstetrics and Gynecology

BRIAN C. BRIDGES, Associate Professor of Pediatrics; Associate Professor of Anesthesiology
B.A. (Furman 1998); M.D. (Medical University of South Carolina 2004) [2010]

THOMAS BRIDGES, Research Assistant Professor of Pharmacology
B.S. (Wheaton 2005); Ph.D. (Vanderbilt 2010) [2015]

ERIC R. BRIGGS, Assistant Professor of Clinical Anesthesiology
B.S. (Louisiana Tech 2002); M.D. (Louisiana State 2006) [2010]

A. BERTRAND BRILL, Research Professor of Radiology and Radiological Sciences
M.D. (Utah 1956); Ph.D. (California, Berkeley 1961) [1997]

DOUGLAS MARSHALL BRINKLEY, Assistant Professor of Medicine
B.S. (Duke 2002); M.D. (Vanderbilt 2007) [2016]

MARCELA BRISOVA, Research Associate Professor of Medicine

EVAN L. BRITAIN, Assistant Professor of Medicine
B.S. (North Carolina 2003); M.D. (Cornell 2007); M.S.C.I. (Vanderbilt 2014) [2013]

KENDAL SCOT BROADIE, Stevenson Professor of Neurobiology; Professor of Pharmacology; Professor of Cell and Developmental Biology

CAROL H. BROADWAY, Clinical Professor of Pediatrics
B.A. (Tennessee 1983); M.D. (UT Health Science Center [Tennessee] 1988) [2000]

E. JANE BROCK, Associate Professor of Clinical Anesthesiology
B.S. (Tennessee, Chattanooga 1983); D.O. (Kirksville College of Osteopathic Medicine 1989) [2008]

JOHN W. BROCK III, Monroe Carell Jr. Chair; Professor of Urologic Surgery; Professor of Pediatrics; Director, Division of Pediatric Urology
B.A. (Vanderbilt 1974); M.D. (Medical College of Georgia 1978) [1983]

ERIN BROCKWAY, Instructor in Clinical Anesthesiology
B.S. (Davidson 2003); M.D. (Texas, San Antonio 2008) [2014]

NEILL BRODERICK, Assistant Professor of Pediatrics

ELIZABETH BROKAMP, Assistant in Pediatrics
B.S. (Ohio State 2013); M.S. (Sarah Lawrence 2016) [2016]

A. SCOTT BROOKS, Clinical Professor of Pediatrics
B.S. (Vanderbilt 1977); M.D. (UT Health Science Center [Tennessee] 1981) [1984]

CRAIG R. BROOKS, Assistant Professor of Medicine; Assistant Professor of Cell and Developmental Biology
B.S. (Emmanuel [Georgia] 2003); Ph.D. (Medical College of Georgia 2008) [2016]

KYLE BROOKS, Assistant in Orthopaedic Surgery and Rehabilitation
B.S. (California, Los Angeles 2002) [2018]

COLLEEN M. BROPHY, Professor of Surgery; Professor of Medicine
B.S., M.D. (Utah 1979, 1983) [2008]

DONALD T. BROTHERS, JR., Associate Clinical Professor of Pediatrics
B.S. (Vanderbilt 1985); M.D. (UT Health Science Center [Tennessee] 1989) [1994]

KYLE B. BROTHERS, Adjunct Assistant Professor of Pediatrics
B.S. (Centre 2000); M.D. (Louisville 2004); Ph.D. (Vanderbilt 2015) [2008]

ABIGAIL MAUREEN BROWN, Assistant Professor of Molecular Physiology and Biophysics
B.Sc. (Illinois, Champaign 1994); M.S. (Miami [Ohio] 1999); Ph.D. (Vanderbilt 2007) [2017]

ALAINA JANEEN BROWN, Assistant Professor of Obstetrics and Gynecology
B.A. (Bayor 2004); M.D. (Texas, Houston 2008) [2016]

ANNE W. BROWN, Assistant in Medicine
B.S.N., M.S.N. (Vanderbilt 1974, 1983) [2001]

ASHLEY R. BROWN, Assistant Professor of Emergency Medicine
B.S. (Washington and Lee 2006); M.D. (Wake Forest 2010) [2013]

CHARLOTTE MORRIGAN BROWN, Assistant Professor of Clinical Pediatrics
B.A. (Wake Forest 2005); M.D. (Vanderbilt 2009) [2015]

CHRISTOPHER BRIAN BROWN, Adjunct Assistant Professor of Pharmacology
B.S. (Auburn 1990); Ph.D. (Vanderbilt 1997) [2003]

DANIEL B. BROWN, Professor of Radiology and Radiological Sciences; Professor of Biomedical Engineering
B.S. (Dickinson 1989); M.D. (Hahnemann Medical 1993) [2013]

DEANNA B. BROWN, Assistant Clinical Professor of Pediatrics
B.S. (Tennessee State 2010) [2013]

DOUGLAS H. BROWN, Assistant Clinical Professor of Obstetrics and Gynecology
B.S. (Birmingham-Southern 1973); M.D. (Alabama, Birmingham 1976) [1980]

ERIC N. BROWN, Assistant Professor of Ophthalmology and Visual Sciences
B.A. (Saint Olaf 2001); Ph.D., M.D. (Iowa 2010, 2010) [2015]

JONATHAN D. BROWN, Assistant Professor of Medicine; Assistant Professor of Molecular Physiology and Biophysics
B.A. (Brown 1981); M.D. (Hahnemann Medical 1983) [1987]

KAREN M. BROWN, Assistant in Neurological Surgery
B.S. (SUNY, Brockport 2003); M.S.N. (Vanderbilt 2017) [2017]

KELLY MARI BROWN, Associate Professor of Clinical Neurology

KIMBERLY J. BROWN, Associate Professor of Clinical Psychiatry and Behavioral Sciences

KYLE L. BROWN, Research Assistant Professor of Medicine
B.S. (Union [Tennessee] 1997); Ph.D. (Vanderbilt 2008) [2008]

NANCY J. BROWN, Hugh J. Morgan Chair in Medicine; Professor of Medicine; Professor of Pharmacology; Chair of the Department of Medicine
B.A. (Yale 1981); M.D. (Harvard Medical 1986) [1992]

REBEKAH FLOWERS BROWN, Assistant Professor of Pediatrics
B.S. (University of the South 1999); M.D. (Arkansas, Little Rock 2003) [2010]

RENEE MARIE BROWN, Adjunct Professor of Hearing and Speech Sciences
B.S. (Daemen 1983); M.S. (North Carolina 1988); Ph.D. (Texas, Dallas 2003) [2017]

STEVEN H. BROWN, Associate Professor of Biomedical Informatics; Director, Health and Medical Informatics

WHITNEY L. BROWNING, Assistant Professor of Pediatrics
B.S., M.D. (Kentucky, Lexington 2001, 2005) [2009]

STEPHEN P. BRUEHL, Professor of Anesthesiology
B.S. (Belmont 1985); M.A., Ph.D. (Kentucky, Lexington 1991, 1994) [2000]
EMILY BRUMFIELD, Assistant Professor of Emergency Medicine
B.S., M.D. (Tulane 2007, 2012) [2016]

NATHAN E. BRUMMEL, Assistant Professor of Medicine
B.S., M.S. (Creighton 1999, 2001); M.D. (Missouri, Saint Louis 2005); M.S.C.J. (Vanderbilt 2013) [2013]

KAYLON L. BRUNER-TRAN, Professor of Obstetrics and Gynecology
B.S. (Delta State 1985); Ph.D. (Vanderbilt 1995) [1999]

LAUREN ALEXANDRA BRUNHOEBER, Assistant in Surgery; Instructor in Nursing
B.H.S. (Miami 2007); B.S. (Georgia State 2009); M.S.N., D.N.P. (Vanderbilt 2015, 2017) [2015]

ALEXANDER JEFFREY BRUNNER, Clinical Professor of Pediatrics
B.A. (Dartmouth 1996); M.D. (Case Western Reserve 2001) [2005]

STEVEN M. BRUNWASSER, Research Instructor in Medicine; Research Instructor in Obstetrics and Gynecology

DEBORAH M. BRYANT, Clinical Professor of Pediatrics
B.A. (Wellesley 1976); M.D. (Vanderbilt 1980) [1983]

G. LEE BRYANT, Clinical Instructor in Otolaryngology
B.S. (Baylor 1987); M.D. (Vanderbilt 1992) [1992]

LAURA ANNEMARIE BRYANT, Assistant Professor of Clinical Medicine
B.S. (Purdue 2010); M.D. (Indiana, Indianapolis 2014) [2017]

JEREMY BRYWCZYNSKI, Associate Professor of Emergency Medicine; Medical Director, Vanderbilt LifeFlight; Assistant Medical Director, Nashville Fire Department
B.S. (Dayton 2000); M.D. (Wright State 2004) [2007]

MICHAEL BÜBISER, Research Assistant Professor of Pharmacology

MACIEJ S. BUCHOWSKI, Research Professor of Medicine; Research Professor of Pediatrics

AMANDA K. BUCK, Instructor in Biomedical Engineering; Instructor in Radiology and Radiological Sciences
B.S. (Mississippi State 1997); Ph.D. (Georgia Institute of Technology 2005) [2012]

SERGEY BUDKO, Research Assistant Professor of Medicine
M.A. (Moscow Institute of Physics and Technology [Russia] 1999); Ph.D. (University of Basel [Switzerland] 2003) [2015]

KIMBERLY ANN BUJE, Associate Clinical Professor of Pediatrics
B.S. (Tennessee, Martin 2000); M.S. (Emory 2003); M.D. (UT Health Science Center [Tennessee] 2007) [2010]

BRADLEY N. BULLOCK, Clinical Professor of Pediatrics
B.S., M.D. (Florida 1989, 1993) [1997]

NADA M. BULUS, Research Assistant Professor of Medicine

MATTHEW R. BUMBALOUGH, Assistant in Medicine
M.S.N. (Vanderbilt 1993); MSN,FNP,ANP [2003]

MELINDA JEAN BUNTIN, Mike Curb Chair for Health Policy; Professor of Science Center [Tennessee] 2007) [2010]

A. D. (Columbia State Community) [1998]; M.S.N. (Vanderbilt 2007) [2008]

SCOTT D. BURY, Assistant Professor of Pathology, Microbiology and Immunology
B.S. (Illinois, Champaign 1997); Ph.D. (University of Washington 2002) [2018]

STEVEN T. BUSBY, Assistant in Medicine
B.S.N. (Troy 1996); M.S.N. (South Alabama 1997); Ph.D. (Tennessee 2009) [2010]

WILLIAM SCOTT BUSH, Adjunct Assistant Professor of Biomedical Informatics
B.S. (Western Kentucky 2003); M.S., Ph.D. (Vanderbilt 2008, 2009) [2010]

BEN HUNTER BUTLER, Assistant Clinical Professor of Pediatrics
B.S. (Mississippi State 2003); M.D. (Emory 2008) [2011]

MIRANDA R. BUTLER, Assistant Clinical Professor of Pediatrics
B.S. (Lee 2006); M.D. (Vanderbilt 2010) [2013]

MOLLY E. BUTLER, Assistant in Psychiatry and Behavioral Sciences
B.S., M.S.N. (Vanderbilt 2005, 2006) [2009]

MWAKA BUTUNGANE-SEXTON, Assistant in Medicine
B.S., M.S.N. (Tennessee State 2002, 2012) [2017]

ZULFIKAR BUX, Adjunct Assistant Professor of Emergency Medicine
M.B.B.S. (Guyana 2007) [2002]

JEFFREY DAVID BYERS, Associate Professor of Clinical Dermatology
B.A. (Rice 1988); M.D. (Duke 1992) [2004]

SHAI C. BYNUM, Assistant in Pediatrics
B.S. (Middle Tennessee State 2005); M.S.N. (Vanderbilt 2007) [2013]

BEVERLY R. BYRAM, Assistant in Medicine
A.D.N. (Tennessee 1975); M.S.N. (Vanderbilt 1992) [1993]

JESSE M. BYRAM, Assistant in Medicine
B.S. (Washington State 2004); M.S.N. (Vanderbilt 2014) [2014]

KEVIN WAYNE BYRAM, Instructor in Medicine

BENJAMIN F. BYRD III, Professor of Medicine
A.B. (Princeton 1973); M.D. (Vanderbilt 1977) [1984]

J. THOMAS W. BYRD, Clinical Professor of Orthopaedic Surgery and Rehabilitation
B.S. (Miami 1978); M.D. (Vanderbilt 1982) [2014]

DANIEL W. BYRN, Senior Associate in Biostatistics; Senior Associate in Medicine; Senior Associate in Biomedical Informatics
B.A. (SUNY, Albany 1983); M.S. (New York Medical 1991) [1999]

MICHAEL T. BYRN, Assistant Professor of Medicine
B.S., B.A. (Duquesne 2002, 2002); D.O. (LECOM 2007) [2015]

BRYAN BYRNSIDE, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.A. (Emory 1998); D.M.D. (Medical University of South Carolina 2003) [2007]

WANDA B. CADE, Associate Clinical Professor of Pediatrics
B.S. (Mississippi State 1989); M.D. (Mississippi, Jackson 1993) [2007]
ERICA J. CARRIER, Research Assistant Professor of Medicine  
B.S. (Guilford 1998); Ph.D. (Medical College of Wisconsin 2003) [2010]  
COLIN MICHAEL CARROLL, Instructor in Clinical Radiology and  
Radiological Sciences  
B.S. (Bellarmine 2008); M.D. (Louisville 2012) [2017]  
FRANK E. CARROLL, Jr., Professor of Clinical Radiology and  
Radiological Sciences, Emeritus  
B.S. (Saint Joseph’s [New York] 1963); M.D. (Hahnemann Medical 1967) [1999]  
KATHERINE E. CARROLL, Assistant in Anesthesiology  
B.S.N. (Oklahoma Baptist 2004); M.S.N. (Vanderbilt 2013) [2014]  
KECIA N. CARROLL, Associate Professor of Pediatrics  
ROBERT J. CARROLL, Research Assistant Professor of Biomedical  
Informatics  
M.S., Ph.D. (Vanderbilt 2011, 2014) [2015]  
ROBERT P. CARSON, Assistant Professor of Pediatrics; Assistant  
Professor of Pharmacology  
B.S. (South Dakota 1995); Ph.D., M.D. (Vanderbilt 2001, 2005) [2011]  
BRUCE D. CARTER, Professor of Biochemistry  
JEFFREY B. CARTER, Assistant Clinical Professor of Oral and  
Maxillofacial Surgery  
B.S. (Tufts 1972); D.M.D. (Connecticut, Stanford 1976); M.D.  
(Vanderbilt 1978) [1999]  
MARY ALYSON CARTER, Assistant in Medicine  
B.S. (Lipscomb 2004); M.S.N. (Vanderbilt 2007) [2010]  
DIANA E. CARVER, Instructor in Radiology and Radiological Sciences  
B.S. (Texas 2005); M.S. (Arizona 2008); M.M.P., M.A., Ph.D.  
CARISSA J. CASCIO, Associate Professor of Psychiatry and Behavioral  
Sciences  
B.S. (Baylor 1997); Ph.D. (Emory 2003) [2007]  
AUDREY JANE CASE, Assistant in Medicine  
B.S.N. (North Carolina 1993); M.S.N. (Old Dominion 1997); D.N.P.  
(Vanderbilt 2010) [1998]  
ROBERT J. CASEY, Assistant Professor of Clinical Pediatrics  
TABITHA ANNE CASILLI, Clinical Instructor in Pediatrics  
B.S. (Middle Tennessee State 2002); M.D. (East Tennessee State  
2010) [2015]  
CHARLES F. CASKEY, Assistant Professor of Radiology and  
Radiological Sciences; Assistant Professor of Biomedical Engineering  
B.S. (Texas 2004); Ph.D. (California, Davis 2008) [2013]  
JAMES E. CASSAT, Assistant Professor of Pediatrics; Assistant  
Professor of Pathology, Microbiology and Immunology; Assistant  
Professor of Biomedical Engineering  
EMILY H. CASTELLanos, Instructor in Medicine  
B.S. (Stanford 2004); M.D. (Vanderbilt 2009) [2012]  
JESSICA L. CASTILHO, Assistant Professor of Medicine  
B.A. (Washington University 2003); M.P.H., M.D. (Johns Hopkins  
2007, 2008) [2015]  
MARCO S. CASTLEBERRY, Associate Clinical Professor of Pediatrics  
B.S. (Abilene Christian 1987); M.D. (Louisiana State, Shreveport  
1993) [2007]  
JUSTIN M. M. CATES, Professor of Pathology, Microbiology and  
Immunology  
JAMES R. CATRO, Associate Clinical Professor of Medicine  
B.A., M.D. (Vanderbilt 1974, 1979) [1986]  
THOMAS F. CATRON, Associate Professor of Medical Education and  
Administration; Associate Professor of Pediatrics  
B.A. (Virginia 1979); M.S., Ph.D. (Peabody 1982, 1989) [1990]  
MICHAEL F. CAUCCI, Assistant Professor of Obstetrics and  
Gynecology; Assistant Professor of Clinical Psychiatry and Behavioral  
Sciences  
B.S. (Scranton 2000); M.D. (Georgetown 2004) [2009]  
KERRI L. CAVANAUGH, Associate Professor of Medicine  
A.B. (Dartmouth 1993); M.D. (Yale 1999); M.H.S. (Johns Hopkins  
2006) [2006]  
LAURA E. CEDO CINTRON, Instructor in Clinical Obstetrics and  
Gynecology  
B.S. (Universidad Interamericana de Puerto Rico [Puerto Rico]  
2002); M.D. (Universidad Central del Caribe [Puerto Rico]  
2010) [2016]  
LINDSAY J. CELADA, Research Instructor in Medicine  
B.S. (Lipscomb 2006); Ph.D. (Tennessee State 2013) [2016]  
CESAR M. CEREJO, Instructor in Clinical Orthopaedic Surgery and  
Rehabilitation  
B.S. (Drury 2008); D.O. (Kirksville College of Osteopathic Medicine  
2012) [2017]  
ROSETTE J. CHAKKALAKAL, Assistant Professor of Medicine  
B.S. (Miami 2003); M.D. (Miami [Florida] 2006) [2012]  
ANURADHA BAPSI CHAKRAVARTHY, Professor of Radiation Oncology  
B.S. (Johns Hopkins 1978); M.D. (George Washington 1983) [1998]  
G. ROGER CHALKLEY, Senior Associate Dean for Biomedical Research,  
Education and Training; Professor of Molecular Physiology and  
Biophysics; Professor of Medical Education and Administration (VU)  
RENEE ARIANNA CHAMBERLAIN, Assistant in Anesthesiology  
B.S.N. (Mississippi 2008); M.S.N. (South Alabama 2016) [2017]  
EUGENE P. CHAMBERS, JR., Assistant Clinical Professor of Surgery  
B.S. (Millsaps 1983); M.D. (Mississippi, Jackson 1990) [2008]  
JILL F. CHAMBERS, Associate Clinical Professor of Obstetrics and  
Gynecology  
B.S. (Vanderbilt 1971); M.D. (Alabama, Birmingham 1974) [1978]  
JOHN W. CHAMBERS, JR., Clinical Professor of Pediatrics  
B.S. (Lee College [Tennessee] 1991); M.D. (UT Health Science Center  
MARK R. CHAMBERS, Assistant Professor of Clinical Medicine; Assistant  
Professor of Clinical Pediatrics  
B.S. (Miami [Ohio] 1988); M.D. (Ohio State 1993) [2010]  
LOLA B. CHAMBLESS, Assistant Professor of Neurological Surgery  
B.S. (Stanford 2005); M.D. (Vanderbilt 2005) [2012]  
JOHN CHRISTOPHER CHAMPION, Assistant Professor of Emergency  
Medicine  
B.S.E. (Duke 2006); M.B.A. (Rice 2011); M.D. (Baylor 2011) [2014]  
MARY CLARE CHAMPION, Assistant Professor of Clinical Psychiatry and  
Behavioral Sciences  
B.A. (Rhodes College 1996); M.A., Ph.D. (Tennessee 2002,  
2005) [2016]  
RACHEL WERGIN CHAMPION, Assistant Professor of Dermatology  
B.S.E. (Duke 2006); M.D. (Texas, Houston 2011) [2015]  
CHARLES G. CHANDLER, Associate Clinical Professor of Pediatrics  
B.A. (Tennessee 1976); M.D. (UT Health Science Center [Tennessee]  
1980) [2007]  
RAKESH CHANDRA, Professor of Otolaryngology  
B.S. (Virginia Polytechnic Institute 1993); M.D. (Maryland 1997) [2014]  
RAIMELA CHANDRAKHAR, Assistant Professor of Biostatistics; Assistant Professor of  
Nursing  
B.S. (Calicut, Thrissur [India] 2001); M.S. (Madurai Kamraj [India]  
2004); M.A., Ph.D. (SUNY, Buffalo 2008, 2011) [2011]  
MEERA CHANDRASEKHAR, Assistant Professor of Clinical  
Anesthesiology  
M.B.B.S. (Bangalore [India] 1979) [1999]  
JOHN HAN-CHIH CHANG, Assistant Professor of Radiation Oncology  
B.S., M.D. (Michigan 1991, 1995) [2013]  
SAM S. CHANG, Patricia and Rodes Hart Chair in Urologic  
Surgery; Professor of Urologic Surgery; Professor of Medicine  
PHILIP CHANNIN, Assistant Clinical Professor of Psychiatry and  
Behavioral Sciences  
B.A. (Amherst 1970); M.Ed., Ed.D. (Massachusetts, Boston 1972,  
1975) [2005]  
JUDY JEAN CHAPMAN, Professor of Nursing, Emerita; Clinical Instructor in  
Emergency Medicine  
B.S.N. (Vanderbilt 1963); M.N. (Florida 1968) [2005]
AMANDA CLOUSE, Assistant Professor of Emergency Medicine  
B.S. (Lipscomb 2000); M.D. (East Tennessee State 2011) [2015]  
CATHERINE GRAYCE CLOUSE, Assistant Professor of Medicine  
B.S. (North Carolina 1998); M.P.H. (California, Berkeley 2005); Ph.D.  
(North Carolina 2012) [2014]  
EDITH E. CLOYD, Assistant in Psychiatry and Behavioral Sciences; Instructor in Nursing  
B.S. (East Tennessee State 1981); J.D. (Tennessee 1985); M.S.N.  
(Vanderbilt 2005) [2006]  
MARK A. CLYMER, Assistant Clinical Professor of Otolaryngology  
B.S., M.D. (Iowa 1986, 1990) [2000]  
ANTHONY J. CMELAK, Professor of Radiation Oncology; Medical Director Vanderbilt-Ingram Cancer Center at Franklin  
B.S. (California, Berkeley 1987); M.D. (Northwestern 1992) [1996]  
KATIE COLLERT COATE, Adjunct Assistant Professor of Molecular Physiology and Biophysics  
B.S., M.S. (Auburn 2005, 2007); Ph.D. (Vanderbilt 2011) [2016]  
CHARLES W. COFFEY II, Professor of Radiation Oncology, Emeritus  
B.S., M.S. (Michigan Technological 1980, 1981); Ph.D. (Vanderbilt  
1986) [1990]  
CHERYL M. COBB, Associate Professor of Clinical Psychiatry and Behavioral Sciences  
B.S., M.D. (Vanderbilt 2001, 2005) [2010]  
MARK A. COBB, Assistant Professor of Neurological Surgery  
B.A. (Lipscomb 1978); M.S. (Vanderbilt 1980, 1990) [2012]  
LORI A. COBURN, Assistant Professor of Medicine  
B.S. (Lyon College 2000); M.D. (Harvard 2004) [2008]  
LAYLA M. COCHRAN, Assistant in Medicine  
B.S. (Tennessee Technological 2002); M.S.N. (Vanderbilt 2007) [2008]  
MICHELLE MACHT COCHRAN, Assistant Clinical Professor of Psychiatry and Behavioral Sciences  
B.S. (Centre 1988); M.D. (Louisville 1992) [1996]  
CHARLES W. COFFEE II, Professor of Radiation Oncology, Emeritus  
B.S., M.S. (Kentucky, Lexington 1971, 1972); Ph.D. (Purdue  
1979) [1993]  
ROBERT J. COFFEY, JR., Ingram Professor of Cancer Research; Professor of Medicine; Professor of Cell and Developmental Biology  
A.B. (Princeton 1970); M.D. (Georgetown 1976) [1986]  
CHERYL M. COFFIN, Professor of Pathology, Microbiology and Immunology, Emerita  
B.A. (Bowdoin 1975); M.D. (Vermont 1980) [2008]  
JOY DARLENE COGAN, Research Professor of Pediatrics  
A.B. (Transylvania 1983); Ph.D. (Vanderbilt 1991) [2003]  
ALISON L. COHEN, Assistant in Otolaryngology  
B.A. (Beloit 1994); M.S.N. (Vanderbilt 2003) [2001]  
JONATHAN A. COHEN, Assistant Clinical Professor of Surgery at St. Thomas Medical Center  
B.S. (California, Los Angeles 1990); M.D. (New York 1994) [2003]  
SARAH SCHWEITZER COHEN, Adjunct Assistant Professor of Medicine  
B.S. (North Carolina 2000); M.S. (Michigan 2002); Ph.D. (North  
Carolina 2010) [2012]  
STANLEY COHEN, Distinguished Professor of Biochemistry, Emeritus  
B.A. (CUNY, Brooklyn College 1943); M.A. (Oberlin 1945); Ph.D.  
(Michigan 1948) [1959]  
ROGER J. COLBRAN, Professor of Molecular Physiology and Biophysics; Acting Chair, Molecular Physiology and Biophysics  
B.Sc. (Bristol [UK] 1982); Ph.D. (Newcastle University 1985) [1986]  
JENNIFER M. COLBY, Assistant Professor of Pathology, Microbiology and Immunology  
B.S. (Vanderbilt 2007); Ph.D. (California, Berkeley 2012) [2015]  
KATIE ANN COLE, Assistant In Surgery  
B.S. (Middle Tennessee State 2005); B.S.N. (Johns Hopkins  
2006); M.S.N. (Vanderbilt 2010) [2011]  
ROSANNE COLEMAN, Assistant Clinical Professor of Pediatrics  
B.S. (Christian Brothers 1985); M.D. (UT Health Science Center  
CORY B. COLLIER, Clinical Instructor Pediatrics  
B.S. (Texas A&M 2003); M.D. (Texas Tech University 2008) [2015]  
CORY A. COLLINGE, Professor of Orthopaedic Surgery and Rehabilitation  
B.A. (Vanderbilt 1988); M.S.; M.D. (Louisville, 1990, 1993) [2015]  
DAVID R. COLLINS, Assistant Clinical Professor of Medicine  
B.E. (Vanderbilt 1993); M.D. (UT Health Science Center [Tennessee] 1997) [2000]  
DOUGLAS J. COLLINS, Associate Clinical Professor of Pediatrics  
B.S. (Memphis State 1987); M.D. (Arkansas, Little Rock 1991) [2006]  
HAROLD B. COLLINS II, Associate Clinical Professor of Obstetrics and Gynecology  
B.A. (Vanderbilt 1985); M.D. (UT Health Science Center [Tennessee] 1989) [2008]  
JO ANN COOK COLLINS, Associate Clinical Professor of Pediatrics  
B.S. (Birmingham-Southern 1993); M.D. (Vanderbilt 1997) [2000]  
MERRI SHAW COLLINS, Associate Clinical Professor of Pediatrics  
B.S. (University of the South 1992); M.D. (UT Health Science Center  
NINA S. COLLINS, Assistant in Surgery  
B.S. (Vanderbilt 1999); B.S.N. (Tennessee Wesleyan 2003); M.S.N.  
(Vanderbilt 2005) [2011]  
SEAN P. COLLINS, Professor of Emergency Medicine  
B.S. (Boston University 1993); M.D.; M.S. (Harvard  
2005) [2011]  
SHEILA COLLINS, Professor of Medicine  
B.S. (Massachusetts 1979); Ph.D. (Massachusetts Institute of  
Technology 1985) [1986]  
PATRICIA A. COMMISSKEY, Research Assistant Professor of Neurology  
B.A. (South Alabama 1991); M.A. (Baltimore 1996); Dr.P.H. (Tulane  
2011) [2016]  
GILBERT M. COMOLADA, Assistant in Urologic Surgery  
B.S.N. (Mississippi University for Women 2008); M.S.N. (Goldfarb  
School of Nursing at Barnes-Jewish College [Missouri] 2012) [2016]  
BRUCE E. COMPAS, Patricia and Rodes Hart Chair; Professor of  
Psychology and Human Development; Professor of Pediatrics  
ELIZABETH STARBUCK COMPTON, Assistant in Surgery  
B.A., M.S.N. (Vanderbilt 2013, 2015) [2015]  
BEATRICE P. CONCEPCION, Assistant Professor of Medicine  
M.D. (Philippines 2004) [2013]  
RAOUl S. CONCEPCION, Assistant Clinical Professor of Urologic Surgery  
B.S. (Toledo 1979); M.D. (Ohio State 1984) [1990]  
ROGER D. CONE, Adjunct Professor of Molecular Physiology and Biophysics  
B.A. (Princeton 1980); Ph.D. (Massachusetts Institute of Technology  
1985) [2008]  
RACHEL W. CONKLIN, Assistant in Radiation Oncology  
B.E. (Vanderbilt 2006); M.S., M.Sc. (Wake Forest 2013, 2015) [2015]  
PETER JEFFREY CONN, Lee E. Limbird Chair in Pharmacology; Professor of Pharmacology  
B.S. (Lee 1981); Ph.D. (Vanderbilt 1986) [2003]  
JIM CONNELLY, Assistant Professor of Pediatrics  
B.S. (Iowa 1999); M.D. (Washington University 2003) [2016]  
NALINI W. CONNER, Assistant Professor of Clinical Psychiatry and Behavioral Sciences  
B.S. (Hampton 1998); Ph.D. (Texas 2006) [2015]  
STEPHANIE JOHNS CONRAD, Assistant Professor of Pediatrics  
B.A. (Southern Adventist 2004); M.D. (Loma Linda 2008) [2015]  
CIARAN CONSIDINE, Assistant Professor of Clinical Neurology  
EDWARD S. CONTURE, Professor of Hearing and Speech Sciences, Emeritus  
B.E. (Vanderbilt 1993); M.D. (UT Health Science Center 
[Tennessee] 1997) [2000]  
ALICE C. COOGAN, Professor of Pathology, Microbiology and Immunology  
B.A. (Stanford 1984); M.D. (Vanderbilt 1988) [2009]  
PHILIP GERLACH COOGAN, Assistant Clinical Professor of Orthopaedic Surgery and Rehabilitation  
A.B. (Iowa 1984); M.D. (Vanderbilt 1988) [2000]
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JEROD SCOTT DENTON</td>
<td>Associate Professor of Anesthesiology; Associate Professor of Pharmacology</td>
</tr>
<tr>
<td>TRACIE L. DEWIRE</td>
<td>Assistant in Surgery; Assistant Professor of Medicine</td>
</tr>
<tr>
<td>STEPHEN A. DEPPEN</td>
<td>Assistant Professor of Thoracic Surgery</td>
</tr>
<tr>
<td>CHARLES V. DEPRIEST</td>
<td>Assistant Professor of Clinical Radiology and Radiological Sciences</td>
</tr>
<tr>
<td>TERENCE S. DERMODY</td>
<td>Adjunct Professor of Pediatrics</td>
</tr>
<tr>
<td>JEROD SCOTT DENTON</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>JAMES DEWAR</td>
<td>Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>JESSICA K. DEVIN</td>
<td>Adjoint Assistant Professor of Medicine</td>
</tr>
<tr>
<td>JAYANT K. DESHPANDE</td>
<td>Adjunct Professor of Anesthesiology</td>
</tr>
<tr>
<td>ADITI A. DESAI</td>
<td>Instructor in Clinical Radiology and Radiological Sciences</td>
</tr>
<tr>
<td>ANNA K. DEWAN</td>
<td>Assistant Professor of Dermatology</td>
</tr>
<tr>
<td>ARIEL Y. DEUTCH</td>
<td>James G. Blakemore Chair in Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>M. SHEILA DESMOND</td>
<td>Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.A.</td>
<td>City University of New York, Queens College 1971; M.D. (New York Medical 1975) [2011]</td>
</tr>
<tr>
<td>MOHAMED MOKHTAR DESOUKI</td>
<td>Associate Professor of Pathology, Microbiology and Immunology</td>
</tr>
<tr>
<td>WOLF-DIETRICH DITTEBARN</td>
<td>Professor of Pharmacology, Emeritus</td>
</tr>
<tr>
<td>KRISTEN BETH DETTORRE</td>
<td>Assistant Professor of Emergency Medicine</td>
</tr>
<tr>
<td>B.S.</td>
<td>Kent State 2002; M.D. (Northeastern Ohio Universities 2006)</td>
</tr>
<tr>
<td>PATRICIA A. DETZEL</td>
<td>Assistant Professor of Clinical Obstetrics and Gynecology</td>
</tr>
<tr>
<td>B.S.N.</td>
<td>Cincinnati 1994; M.S.N. (Vanderbilt 1998) [2010]</td>
</tr>
<tr>
<td>ARIEL Y. DEUTCH</td>
<td>James G. Blakemore Chair in Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>WILLIAM MICHAEL DEVOE</td>
<td>Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.A.</td>
<td>Ohio State 1977</td>
</tr>
<tr>
<td>ANNA K. DEWAN</td>
<td>Assistant Professor of Dermatology</td>
</tr>
<tr>
<td>JAMES DEWAR</td>
<td>Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>JOSEPH EDWARD DEWEESIE</td>
<td>Adjunct Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>B.S.</td>
<td>Freed-Hardeman 2004; Ph.D. (Vanderbilt 2009) [2009]</td>
</tr>
<tr>
<td>VICTORIA J. DEVITO</td>
<td>Associate Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.S.</td>
<td>Ohio College of Ohio 1979</td>
</tr>
<tr>
<td>WILLIAM MICHAEL DEVOE</td>
<td>Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.A.</td>
<td>Ohio State 1977</td>
</tr>
<tr>
<td>ANNA K. DEWAN</td>
<td>Assistant Professor of Dermatology</td>
</tr>
<tr>
<td>JAMES DEWAR</td>
<td>Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>GREGORY R. DINGEL</td>
<td>Assistant Professor of Emergency Medicine</td>
</tr>
<tr>
<td>B.S.</td>
<td>Freed-Hardeman 2004; Ph.D. (Vanderbilt 2009) [2009]</td>
</tr>
<tr>
<td>CHARLENNE M. DEWEY</td>
<td>Professor of Medical Education and Administration; Professor of Medicine</td>
</tr>
<tr>
<td>B.S.</td>
<td>(Bradley 1985); M.D. (Morehouse 1990); M.Ed. (Houston 2004) [2007]</td>
</tr>
<tr>
<td>TRACEY L. DEWIRE</td>
<td>Assistant in Surgery</td>
</tr>
<tr>
<td>B.S.</td>
<td>Tennessee 1990; M.S. (Vanderbilt 2008) [2009]</td>
</tr>
<tr>
<td>JUDITH DEXHEIMER</td>
<td>Adjunct Instructor in Biomedical Informatics</td>
</tr>
<tr>
<td>B.S.</td>
<td>Central Florida 2003; M.S., Ph.D. (Vanderbilt 2006, 2011) [2011]</td>
</tr>
<tr>
<td>PIERRE-FRANCOIS D’HAES</td>
<td>Research Assistant Professor of Electrical Engineering; Research Assistant Professor of Neurological Surgery</td>
</tr>
<tr>
<td>ALEX BENJAMIN DIAMOND</td>
<td>Associate Professor of Orthopaedic Surgery and Rehabilitation; Associate Professor of Pediatrics</td>
</tr>
<tr>
<td>ANJANI DHAMODHARAN</td>
<td>Assistant Clinical Professor of Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>S. KENT DICKESON</td>
<td>Research Assistant Professor of Pathology, Microbiology and Immunology</td>
</tr>
<tr>
<td>HARIK R. DIXIT</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>K. H. DIXIT</td>
<td>Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>J. H. DIXIT</td>
<td>Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>MARY S. D’MARCHET</td>
<td>Professor of Nursing (Statistics and Measurements)</td>
</tr>
<tr>
<td>ANNA D. DIKOLA</td>
<td>Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>GEORGE S. DINGEL</td>
<td>Professor of Radiation Oncology</td>
</tr>
<tr>
<td>ANNA D. DIKOLA</td>
<td>Research Assistant Professor of Obstetrics and Gynecology</td>
</tr>
<tr>
<td>THOMAS S. DINA</td>
<td>Professor of Radiology and Radiological Sciences, Emeritus</td>
</tr>
<tr>
<td>TEOJUN DINARAM</td>
<td>Assistant Professor of Clinical Medicine</td>
</tr>
<tr>
<td>GEORGE S. DINGEL</td>
<td>Professor of Radiation Oncology</td>
</tr>
<tr>
<td>ANNA D. DIKOLA</td>
<td>Research Assistant Professor of Obstetrics and Gynecology</td>
</tr>
<tr>
<td>TEOJUN DINARAM</td>
<td>Assistant Professor of Clinical Medicine</td>
</tr>
<tr>
<td>ANDREW DITTMER</td>
<td>Adjunct Assistant Professor of Hearing and Speech Sciences</td>
</tr>
<tr>
<td>KURT F. DITTRICH</td>
<td>Assistant Professor of Clinical Anesthesiology</td>
</tr>
<tr>
<td>B.S.</td>
<td>Tennessee 1990; M.S. (Vanderbilt 2008) [2009]</td>
</tr>
<tr>
<td>JEROD SCOTT DENTON</td>
<td>Associate Professor of Anesthesiology; Associate Professor of Pharmacology</td>
</tr>
<tr>
<td>TRACIE L. DEWIRE</td>
<td>Assistant in Surgery; Assistant Professor of Medicine</td>
</tr>
<tr>
<td>STEPHEN A. DEPPEN</td>
<td>Assistant Professor of Thoracic Surgery</td>
</tr>
<tr>
<td>CHARLES V. DEPRIEST</td>
<td>Assistant Professor of Clinical Radiology and Radiological Sciences</td>
</tr>
<tr>
<td>TERENCE S. DERMODY</td>
<td>Adjunct Professor of Pediatrics</td>
</tr>
<tr>
<td>JEROD SCOTT DENTON</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>JAMES DEWAR</td>
<td>Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>JESSICA K. DEVIN</td>
<td>Adjoint Assistant Professor of Medicine</td>
</tr>
<tr>
<td>JAYANT K. DESHPANDE</td>
<td>Adjunct Professor of Anesthesiology</td>
</tr>
<tr>
<td>ADITI A. DESAI</td>
<td>Instructor in Clinical Radiology and Radiological Sciences</td>
</tr>
<tr>
<td>ANNA K. DEWAN</td>
<td>Assistant Professor of Dermatology</td>
</tr>
<tr>
<td>ARIEL Y. DEUTCH</td>
<td>James G. Blakemore Chair in Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>MOHAMED MOKHTAR DESOUKI</td>
<td>Associate Professor of Pathology, Microbiology and Immunology</td>
</tr>
<tr>
<td>WOLF-DIETRICH DITTEBARN</td>
<td>Professor of Pharmacology, Emeritus</td>
</tr>
<tr>
<td>KRISTEN BETH DETTORRE</td>
<td>Assistant Professor of Emergency Medicine</td>
</tr>
<tr>
<td>B.S.</td>
<td>Kent State 2002; M.D. (Northeastern Ohio Universities 2006)</td>
</tr>
<tr>
<td>PATRICIA A. DETZEL</td>
<td>Assistant Professor of Clinical Obstetrics and Gynecology</td>
</tr>
<tr>
<td>B.S.N.</td>
<td>Cincinnati 1994; M.S.N. (Vanderbilt 1998) [2010]</td>
</tr>
<tr>
<td>ARIEL Y. DEUTCH</td>
<td>James G. Blakemore Chair in Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>WILLIAM MICHAEL DEVOE</td>
<td>Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.A.</td>
<td>Miami [Ohio] 1974; M.D. (Ohio State 1977) [2017]</td>
</tr>
<tr>
<td>ANNA K. DEWAN</td>
<td>Assistant Professor of Dermatology</td>
</tr>
<tr>
<td>JAMES DEWAR</td>
<td>Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>JOSEPH EDWARD DEWEESIE</td>
<td>Adjunct Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>B.S.</td>
<td>Freed-Hardeman 2004; Ph.D. (Vanderbilt 2009) [2009]</td>
</tr>
<tr>
<td>VICTORIA J. DEVITO</td>
<td>Associate Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.S.</td>
<td>Ohio College of Ohio 1979</td>
</tr>
<tr>
<td>WILLIAM MICHAEL DEVOE</td>
<td>Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.A.</td>
<td>Miami [Ohio] 1974; M.D. (Ohio State 1977) [2017]</td>
</tr>
<tr>
<td>ANNA K. DEWAN</td>
<td>Assistant Professor of Dermatology</td>
</tr>
<tr>
<td>JAMES DEWAR</td>
<td>Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>JOSEPH EDWARD DEWEESIE</td>
<td>Adjunct Assistant Professor of Biochemistry</td>
</tr>
<tr>
<td>B.S.</td>
<td>Freed-Hardeman 2004; Ph.D. (Vanderbilt 2009) [2009]</td>
</tr>
<tr>
<td>CHARLENNE M. DEWEY</td>
<td>Professor of Medical Education and Administration; Professor of Medicine</td>
</tr>
<tr>
<td>B.S.</td>
<td>(Bradley 1985); M.D. (Morehouse 1990); M.Ed. (Houston 2004) [2007]</td>
</tr>
<tr>
<td>TRACEY L. DEWIRE</td>
<td>Assistant in Surgery</td>
</tr>
<tr>
<td>B.S.</td>
<td>Tennessee 1990; M.S. (Vanderbilt 2008) [2009]</td>
</tr>
<tr>
<td>JUDITH DEXHEIMER</td>
<td>Adjunct Instructor in Biomedical Informatics</td>
</tr>
<tr>
<td>B.S.</td>
<td>Central Florida 2003; M.S., Ph.D. (Vanderbilt 2006, 2011) [2011]</td>
</tr>
</tbody>
</table>
SCHOOL OF MEDICINE / FACULTY

157

STEVEN T. EIDSON, Assistant Professor of Clinical Pediatrics
B.A. (Smith 1981); M.D. (Emory 1986) [2001]

TIMOTHY H. EIDSON, Clinical Professor of Pediatrics
B.S. (Bob Jones 1992); M.D. (UT Health Science Center [Tennessee] 1996) [2000]

ESTHER EISENBERG, Professor of Obstetrics and Gynecology, Emerita
B.A. (City College of New York 1973); M.D. (Yeshiva 1976); M.P.H. (Vanderbilt 2000) [1992]

ROSANA EISENBERG, Assistant Professor of Pathology, Microbiology and Immunology

WAEL EL-RIFAI, Adjunct Professor of Surgery

MAE EL-SOURADY, Assistant Professor of Medicine; Assistant Professor of Pediatrics

TOM A. ELASY, Ann and Roscoe R. Robinson Chair of Clinical Research at the Diabetes Center; Professor of Medicine; Director, Division of General Internal Medicine and Public Health

FLORENCE ELEFTERIOU, Adjunct Associate Professor of Medicine
M.S. (Burgundy [France] 1990); Ph.D. (Université Claude Bernard Lyon 1 [France] 1996) [2006]

BERTHA CHRISTINA ELIAS, Research Assistant Professor of Medicine

FERNANDO ELLIOVICH, Professor of Medicine

CHARLES D. ELLIS, Research Assistant Professor of Medicine

CHRISTOPHER RANDALL ELLIS, Associate Professor of Medicine
B.S. (Cornell 1995); M.D. (Rochester 2000) [2009]

DARRELL L. ELLIS, Professor of Dermatology
B.S. (Kansas State 1973); M.D. (Kansas 1976) [1984]

SHELLEY E. ELLIS, Assistant Professor of Clinical Medicine
B.A. (Vanderbilt 1992); M.D. (Texas, Dallas 1996); M.P.H. (Vanderbilt 2001) [2002]

WENDY DREW ELLIS, Assistant Professor of Radiology and Radiological Sciences
B.A. (Florida State 2001); M.D. (Vanderbilt 2006) [2012]

SHANNON MARIE ELLRICH, Assistant in Anesthesiology; Lecturer in Nursing
B.S.N. (Belmont 2009); M.S.N. (Vanderbilt 2017) [2017]

EMAD A. ELSAMADICY, Assistant Professor of Obstetrics and Gynecology
B.S. (Vanderbilt 2006); M.S. (Georgetown 2009); M.D. (Alabama, Birmingham 2013) [2017]

SAKINA ELTM, Adjunct Professor of Pharmacology
D.V.M. (Khartoum [Sudan] 1982); M.S., Ph.D. (Cornell 1986, 1989) [2014]

EUGENE WESLEY ELY, Grant W. Liddle Chair; Professor of Medicine

KIM ADAMS ELY, Assistant Professor of Pathology, Microbiology and Immunology
B.S. (Massachusetts Institute of Technology 1985); M.D. (Tulane 1989) [1998]

BRIAN G. EMELICH, Associate Professor of Clinical Anesthesiology
B.A. (Notre Dame 1999); M.D. (Vanderbilt 2002) [2013]

EDWIN B. EMERSON, Assistant Professor of Clinical Otolaryngology
B.S. (Tennessee, Martin 1977); M.D. (UT Health Science Center [Tennessee] 1981) [2004]

RONALD B. EMESON, Joel G. Hardman Chair in Pharmacology; Professor of Pharmacology; Professor of Molecular Physiology and Biophysics; Professor of Psychiatry and Behavioral Sciences; Professor of Biochemistry
B.A. (Johns Hopkins 1980); Ph.D. (Colorado 1986) [1991]

HOLLY B. ENDE, Assistant Professor of Anesthesiology
B.A., M.D. (Baylor 2007, 2011) [2016]

BARBARA ENGLERDERT, Associate Professor of Pediatrics

BRIAN G. ENGELHARDT, Associate Professor of Medicine
B.S. (Michigan, Dearborn 1996); M.D. (Case Western Reserve 2000); M.S.C.I. (Vanderbilt 2008) [2006]

DARREN W. ENGERS, Research Assistant Professor of Pharmacology
B.S. (Delaware 1998); Ph.D. (Texas 2006) [2012]

JULIE ENGERS, Research Instructor in Pharmacology
B.S., M.S. (Louisiana State 1998, 2000); Ph.D. (Texas 2005) [2008]

LAUREN E. ENGLAND Assistant in Urologic Surgery
B.S.N. (Louisiana, Monroe 2001); M.S.N. (Alabama, Huntsville 2005) [2011]

JEANNE CAITLYN ENSTROM, Assistant in Surgery
B.S.N. (American International 2011); M.S.N. (Northeastern 2017) [2017]

STEPHEN E. ENTMAN, Professor of Obstetrics and Gynecology, Emeritus
A.B. (Harvard 1964); M.D. (Duke 1968) [1980]

MEIRA EPSTEIN, Adjunct Associate Professor of Medicine

PAUL EPSTEIN, Assistant Professor of Medicine
B.A. (Princeton 1976); M.D. (Yale 1980) [2015]

JENNIFER CUNNINGHAM ERVES, Adjunct Assistant Professor of Medicine
B.S., M.S. (Tuskegee 2006, 2008); M.A., Ph.D. (Alabama, Birmingham 2013, 2013) [2016]

KIMBERLY ANNE ERVIN, Assistant in Medicine
B.S., A.D.N. (Beltmore 1982, 1984); M.S.N. (Middle Tennessee State 2009) [2017]

WARREN D. ERVIN, Clinical Professor of Pediatrics
B.S., M.S. (Stanford 1975, 1975); M.D. (Duke 1980) [2003]

ADAM JOHN ESBENSHADE, Assistant Professor of Pediatrics
B.A. (Vanderbilt 1999); M.D. (UT Health Science Center [Tennessee] 2004); M.S.C.I. (Vanderbilt 2010) [2010]

JEFFREY B. ESKIND, Assistant Clinical Professor of Medicine
A.B. (Harvard 1976); M.D. (Tulane 1980) [1985]

STEVEN J. ESKIND, Assistant Professor of Surgery
A.B. (Washington University 1973); M.D. (Tulane 1977) [1983]

FERDINAND S. ESPELETA, Assistant Clinical Professor of Pediatrics

JENNIFER ESS, Assistant Professor of Pediatric Medicine at Meharry Medical College; Associate Professor of Pediatrics
B.A. (Pittsburgh 1981); B.S.N. (Cincinnati 1983); M.S. (Kansas 1989); M.D. (Colorado 1999) [2006]

KEVIN C. ESS, Gerald M. Fenichel Chair in Neurology; Associate Professor of Pediatrics; Associate Professor of Neurology; Director, Division of Pediatric Neurology

CRISTINA MARIA ESTRADA, Associate Professor of Emergency Medicine; Associate Professor of Clinical Pediatrics
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree/Institution/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICOLAS P. FORGET</td>
<td>Assistant Professor of Emergency Medicine</td>
</tr>
<tr>
<td>B.Sc. (McGill [Canada]) 1997; M.D. (Maryland, Baltimore 2004)</td>
<td></td>
</tr>
<tr>
<td>MARY C. FORRESTER</td>
<td>Assistant in Surgery</td>
</tr>
<tr>
<td>B.S. (Lipscomb 1996); M.S.N. (Vanderbilt 2003)</td>
<td></td>
</tr>
<tr>
<td>KYLE FORTMAN</td>
<td>Assistant in Medicine</td>
</tr>
<tr>
<td>B.S. (Benedictine [Illinois] 1995); M.P.A. (Nebraska 2006)</td>
<td></td>
</tr>
<tr>
<td>KIMBERLY B. FORTNER</td>
<td>Assistant Clinical Professor of Obstetrics and Gynecology</td>
</tr>
<tr>
<td>B.S. (Tennessee 1997); M.D. (Emory 2001)</td>
<td></td>
</tr>
<tr>
<td>DANIEL JOHN FOSTER</td>
<td>Research Instructor in Pharmacology</td>
</tr>
<tr>
<td>B.S. (Bucknell 2005); Ph.D. (Michigan 2010)</td>
<td></td>
</tr>
<tr>
<td>JOHN RANDOLPH FOSTER</td>
<td>Instructor in Clinical Anesthesiology</td>
</tr>
<tr>
<td>B.A. (Clemson 1997); M.D. (Medical University of South Carolina 2005)</td>
<td></td>
</tr>
<tr>
<td>JAY H. FOWKE</td>
<td>Adjunct Associate Professor of Medicine</td>
</tr>
<tr>
<td>B.A. (Clark 1987); M.S. (Michigan 1990); M.P.H. (SUNY, Albany 1994); Ph.D. (Massachusetts, Boston 2000)</td>
<td>2001</td>
</tr>
<tr>
<td>LESLIE C. FOWLER</td>
<td>Assistant in Anesthesiology</td>
</tr>
<tr>
<td>B.A. (Clemson 1997); M.Ed. (Southern Wesleyan 2006)</td>
<td></td>
</tr>
<tr>
<td>MICHAEL J. FOWLER</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>DANIEL J. FRANCE</td>
<td>Research Professor of Anesthesiology; Research Associate Professor of Biomedical Engineering</td>
</tr>
<tr>
<td>SHARON H. FRANCIS</td>
<td>Adjunct Professor of Molecular Physiology and Biophysics</td>
</tr>
<tr>
<td>B.S. (Western Kentucky 1965); Ph.D. (Vanderbilt 1970)</td>
<td></td>
</tr>
<tr>
<td>BRIDGETTE BOGGESS FRANEY</td>
<td>Assistant Professor of Clinical Medicine</td>
</tr>
<tr>
<td>B.S. (Kentucky, Lexington 1994); M.D. (Louisville 2003)</td>
<td></td>
</tr>
<tr>
<td>BEVERLEY A. FRANK</td>
<td>Associate Clinical Professor of Pediatrics</td>
</tr>
<tr>
<td>B.S.N., M.D. (Pittsburgh 1980, 1992)</td>
<td></td>
</tr>
<tr>
<td>ANDREW DAVID FRANKLIN</td>
<td>Assistant Professor of Anesthesiology</td>
</tr>
<tr>
<td>B.S. (University of Georgia Center for Continuing Education 2001); M.D. (Medical College of Georgia 2005); M.B.A. (George Washington 2015)</td>
<td>2010</td>
</tr>
<tr>
<td>JEFFREY L. FRANKLIN</td>
<td>Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>B.A. (Haverford 1984); Ph.D. (Vanderbilt 1992)</td>
<td></td>
</tr>
<tr>
<td>JERRY M. FRANKLIN</td>
<td>Assistant Professor of Clinical Medicine</td>
</tr>
<tr>
<td>B.S. (Tennessee, Martin 1973); M.D. (UT Health Science Center [Tennessee] 1977)</td>
<td>2012</td>
</tr>
<tr>
<td>LLOYD D. FRANKLIN</td>
<td>Clinical Professor of Pediatrics</td>
</tr>
<tr>
<td>B.S. (Birmingham-Southern 1976); M.D. (Alabama, Birmingham 1980)</td>
<td></td>
</tr>
<tr>
<td>MELANIE E. FRANKLIN</td>
<td>Assistant in Pediatrics</td>
</tr>
<tr>
<td>B.S.N. (Auburn 2005); M.S.N. (Alabama, Birmingham 2014)</td>
<td></td>
</tr>
<tr>
<td>JOHN J. FRANKS</td>
<td>Professor of Anesthesiology, Emeritus</td>
</tr>
<tr>
<td>B.A., M.D. (Colorado 1951, 1954)</td>
<td></td>
</tr>
<tr>
<td>LINDSEY D. FRANKS</td>
<td>Assistant in Medicine</td>
</tr>
<tr>
<td>B.S. (Vanderbilt 2008); M.S.W. (North Carolina 2013)</td>
<td></td>
</tr>
<tr>
<td>JOSEPH L. FREDI</td>
<td>Assistant Professor of Medicine</td>
</tr>
<tr>
<td>A.B. (Rutgers, Newark 1976); M.D. (UT Health Science Center [Tennessee] 1983)</td>
<td>2007</td>
</tr>
<tr>
<td>BRADLEY W. FREEMAN</td>
<td>Associate Professor of Clinical Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>B.S. (Florida 1996); M.D. (South Florida 2003)</td>
<td></td>
</tr>
<tr>
<td>MICHAEL L. FREEMAN</td>
<td>Professor of Radiation Oncology; Professor of Radiology and Radiological Sciences</td>
</tr>
<tr>
<td>B.S., Ph.D. (Colorado State 1974, 1978)</td>
<td></td>
</tr>
<tr>
<td>PHYLLIS FREEMAN</td>
<td>Adjunct Instructor in Pharmacology</td>
</tr>
<tr>
<td>B.S. (Fisk 1986); Ph.D. (Meharry Medical 1993)</td>
<td></td>
</tr>
<tr>
<td>FRANK R. FREEMON</td>
<td>Professor of Neurology; Emeritus</td>
</tr>
<tr>
<td>MATTHEW S. FREIBERG</td>
<td>Professor of Medicine</td>
</tr>
<tr>
<td>B.S. (University of Washington 1991); M.D. (Oregon Health and Science 1995); M.Sc. (Boston University 2004)</td>
<td>2014</td>
</tr>
<tr>
<td>KATHERINE L. FREUNDLICH</td>
<td>Assistant Professor of Clinical Pediatrics</td>
</tr>
<tr>
<td>B.A. (Johns Hopkins 2006); M.D. (Baylor 2010)</td>
<td></td>
</tr>
<tr>
<td>ROBERT EDWARD FREUNDLICH</td>
<td>Assistant Professor of Anesthesiology; Assistant Professor of Biomedical Informatics</td>
</tr>
<tr>
<td>B.A., M.S. (Johns Hopkins 2005, 2007); M.D. (Baylor 2010)</td>
<td></td>
</tr>
<tr>
<td>DAVID B. FRIEDMAN</td>
<td>Adjunct Research Associate Professor of Biochemistry</td>
</tr>
<tr>
<td>B.S. (California, Irvine 1987); Ph.D. (University of Washington 1993)</td>
<td>2001</td>
</tr>
<tr>
<td>DEBRA L. FRIEDMAN</td>
<td>E. Bronson Ingram Chair in Pediatric Oncology; Associate Professor of Pediatrics; Director, Division of Pediatric Hematology/Oncology</td>
</tr>
<tr>
<td>B.S. (CUNY, Queens College 1975); M.S. (Face 1981); M.D. (Robert Wood Johnson Medical, New Brunswick 1991); M.S. (Pennsylvania 1997)</td>
<td>2008</td>
</tr>
<tr>
<td>CHRISTOPHER A. FRIEDRICH</td>
<td>Associate Professor of Pediatrics</td>
</tr>
<tr>
<td>B.A. (Glassboro State 1978); M.S., Ph.D. (Texas, Houston 1984, 1986); M.D. (Robert Wood Johnson Medical, New Brunswick 1988)</td>
<td>2018</td>
</tr>
<tr>
<td>G. CHRISTIAN FRIESINGER III</td>
<td>Assistant Professor of Clinical Medicine</td>
</tr>
<tr>
<td>B.S. (Davidson 1979); M.D. (UT Health Science Center [Tennessee] 1984)</td>
<td>2006</td>
</tr>
<tr>
<td>K. FRANCES FRIGON</td>
<td>Clinical Instructor in Pediatrics</td>
</tr>
<tr>
<td>B.S. (UT Health Science Center [Tennessee] 1977); J.D. (Georgetown 1992)</td>
<td>2012</td>
</tr>
<tr>
<td>BENJAMIN PAUL FRISCHHERTZ</td>
<td>Assistant Professor of Medicine</td>
</tr>
<tr>
<td>B.A. (Dartmouth 2002); M.D. (Louisiana State 2006)</td>
<td></td>
</tr>
<tr>
<td>MARK E. FRISSE</td>
<td>Accenture Chair in the Vanderbilt Center for Better Health; Professor of Biomedical Informatics</td>
</tr>
<tr>
<td>B.S. (Notre Dame 1974); M.D. (Washington University 1978); M.S. (Stanford 1987); M.B.A. (Washington University 1997)</td>
<td>2004</td>
</tr>
<tr>
<td>WILLIAM H. FRIST</td>
<td>Adjunct Professor of Cardiac Surgery</td>
</tr>
<tr>
<td>RYAN ANDREW FRITZ</td>
<td>Assistant Professor of Emergency Medicine</td>
</tr>
<tr>
<td>B.S. (Virginia 2002); M.B.A., M.D. (Vanderbilt 2013, 2013)</td>
<td></td>
</tr>
<tr>
<td>MICHAEL T. FROEHLER</td>
<td>Assistant Professor of Neurology; Assistant Professor of Neurological Surgery; Assistant Professor of Radiology and Radiological Sciences</td>
</tr>
<tr>
<td>DOUGLAS H. FUCHS</td>
<td>Nicholas Hobbs Chair; Professor of Special Education; Professor of Pediatrics</td>
</tr>
<tr>
<td>B.S. (Colorado School of Mines 1977); M.D. (Vanderbilt 1981)</td>
<td></td>
</tr>
<tr>
<td>LYNN S. FUCHS</td>
<td>Dunn Family Chair in Psychoeducational Assessment; Professor of Special Education; Professor of Pediatrics</td>
</tr>
<tr>
<td>SABINE FUHRMANN</td>
<td>Associate Professor of Ophthalmology and Visual Sciences; Associate Professor of Cell and Developmental Biology</td>
</tr>
<tr>
<td>MATTHEW ROBERT FUSCO</td>
<td>Assistant Professor of Neurological Surgery; Assistant Professor of Radiology and Radiological Sciences</td>
</tr>
<tr>
<td>B.A. (Virginia 2003); M.D. (Wake Forest 2007)</td>
<td></td>
</tr>
</tbody>
</table>
FRED GOLDNER, JR., Clinical Professor of Medicine, Emeritus  
B.A., M.D. (Vanderbilt 1945, 1948) [1954]  
JILLIAN G. GOLES, Assistant in Surgery  
A.A. (2012); B.A. (Maryland, Baltimore 2014); M.S. (Shenandoah University 2016) [2017]  
THOMAS A. GOLPER, Professor of Medicine  
B.A. (Northwestern 1969); M.D. (Indiana, Bloomington 1973) [1999]  
JOSE A. GOMEZ, Assistant Professor of Medicine; Assistant Professor of Molecular Biology and Biophysics  
B.S. (Universidad Nacional de Colombia 1995); M.S. (Wisconsin, Milwaukee 2003); Ph.D. (Case Western Reserve 2009) [2015]  
GILBERT GONZALES, JR., Assistant Professor of Health Policy  
B.A. (Baylor 2008); M.H.A. (North Texas Health Science Center 2010); Ph.D. (Minnesota 2015) [2015]  
LAZARO GONZALEZ CALVO, Adjunct Assistant Professor of Pediatrics  
Ph.D. (Alicante [Spain] 2006); B.S.N. (Salamanca [Spain] 2012) [2015]  
RACHEL HUFFINES GOODE, Assistant Professor of Pediatrics  
B.A. (Maryville 2005); M.D. (Tennessee, Memphis 2010) [2016]  
LINDSEY MARTIN GOODMAN Assistant Professor of Clinical Medicine  
STACEY A. GOODMAN, Professor of Medicine; Director, Special Fellowship Program for Marrow Transplant  
M.D. (New York 1987) [1993]  
DAVID LEE GORDEN, Professor of Surgery  
A.B. (Brown 1985); M.D. (Vanderbilt 1990) [2001]  
JOHN DEWITT GORDEN, Assistant Professor of Clinical Medicine  
JEFFREY S. GORDON, Professor of Educational Technology and Informatics; Professor of Biomedical Informatics  
JEFFREY S. GORDON, Assistant Clinical Professor of Pediatrics  
B.A., M.S. (Vanderbilt 1967, 1970); M.D. (Tulane 1972) [2012]  
REYNA L. GORDON, Assistant Professor of Otolaryngology; Assistant Professor of Psychology  
B.M. (Southern California 2001); M.S. (Université de Provence [France] 2004); Ph.D. (Florida Atlantic 2010) [2015]  
SHARON M. GORDON, Assistant Clinical Professor of Psychiatry and Behavioral Sciences  
JAMES E. GORE, Assistant Professor of Clinical Medicine  
B.S., M.D. (Kentucky, Lexington 1995, 1999) [2007]  
JOHN C. GORE, University Professor of Radiology and Radiological Sciences; Hertha Ramsey Cress Chair in Medicine; Professor of Physics and Astronomy; Professor of Biomedical Engineering; Professor of Molecular Physiology and Biophysics; Director, Institute of Imaging Science  
KATHERINE GOTHAM, Assistant Professor of Psychiatry and Behavioral Sciences  
ALISA CARMAN GOTTE, Associate Professor of Clinical Pediatrics  
B.A. (Texas 1998); M.D., M.S. (Texas, Southwestern Medical 2002, 2009) [2015]  
GERALD S. GOTTERER, Professor of Medical Education and Administration, Emeritus  
A.B. (Harvard 1955); M.D. (Chicago 1958); Ph.D. (Johns Hopkins 1964) [1986]  
STEVEN L. GOUDY, Adjunct Associate Professor of Otolaryngology  
B.S. (Centre 1992); M.D. (Louisville 1994) [2005]  
EDWARD R. GOULD, Assistant Professor of Medicine  
B.A., B.S. (SUNY, Albany 2005, 2005); M.D. (SUNY Upstate Medical University 2005) [2015]  
KATHLEEN L. GOULD, Professor of Cell and Developmental Biology  
A.B. (California, Berkeley 1981); Ph.D. (California, San Diego 1987) [1991]  
PARUL MANI GOYAL, Assistant Professor of Clinical Medicine  
M.B.B.S. (Government Medical, Chandigarh [India] 2000) [2009]  
CAITLIN M. GRABARITS, Associate in Obstetrics and Gynecology  
B.A. (Illinois Wesleyan 2012); M.G.C. (Maryland, Baltimore 2014) [2014]  
MATTHEW R. GRACE, Assistant Clinical Professor of Obstetrics and Gynecology  
B.A. (Vanderbilt 2000); M.D. (Wake Forest 2010) [2018]  
THOMAS BRENT GRAHAM, Associate Professor of Pediatrics  
B.S. (Rhodes College 1988); M.D. (Vanderbilt 1992); M.S. (Cincinnati 2000) [2008]  
THOMAS P. GRAHAM, JR., Professor of Pediatrics, Emeritus  
B.A., M.D. (Duke 1959, 1963) [1971]  
TODD R. GRAHAM, Professor of Biological Sciences; Professor of Cell and Developmental Biology  
B.S. (Maryville 1984); Ph.D. (Saint Louis 1988) [1992]  
JOSHUA R. GRAHE, Assistant Professor of Clinical Pediatrics  
B.S. (2005); D.O. (WWSom 2011) [2015]  
ANTONIO M. GRANDA, Assistant Clinical Professor of Medicine  
B.A. (Delaware 1968); M.D. (Thomas Jefferson 1974) [2000]  
DARYL K. GRANNER, Professor of Molecular Physiology and Biophysics, Emeritus  
D. WESLEY GRANTHAM, Professor of Hearing and Speech Sciences, Emeritus  
B.A. (Oberlin 1967); Ph.D. (Indiana, Bloomington 1975) [1980]  
ANA M. GRAU, Associate Professor of Surgery  
M.D. (Pontificia Universidad Católica de Chile 1990) [2007]  
AMY BETH GRAVES, Assistant Professor of Clinical Obstetrics and Gynecology  
B.S.N. (Murray State 1999); M.S.N. (Vanderbilt 2007) [2015]  
CORNELIA R. GRAVES, Clinical Professor of Obstetrics and Gynecology  
B.A. (Baylor 1983); M.D. (Arkansas, Little Rock 1987) [2008]  
JOHN A. GRAVES, Assistant Professor of Health Policy; Assistant Professor of Medicine  
B.A. (University of the South 2003); Ph.D. (Harvard 2011) [2011]  
SARAH JAYNE GRAVES, Assistant in Neurology  
B.S. (Florida Gulf Coast 2007); M.S. (Belmont 2015) [2016]  
JAMES D. GREEN, Assistant Professor of Radiology and Radiological Sciences  
B.A. (Michigan 1970); M.D. (Illinois, Chicago 1977) [2006]  
JENNIFER KISER GREEN, Assistant Professor of Medicine; Assistant Professor of Pediatrics  
B.S. (Elon 1999); M.D. (North Carolina 2003); M.P.H. (Vanderbilt 2010) [2007]  
JENNIFER R. GREEN, Assistant Professor of Medicine  
B.S. (Mississippi State 2004); M.D. (Mississippi, Jackson 2008) [2016]  
KELLY D. GREEN, Assistant Clinical Professor of Medicine  
B.S.N. (Union [Tennessee] 1997); B.S. (Freed-Hardeman 1999); M.D. (U.T Health Science Center [Tennessee] 2010) [2014]  
SHARON FETTERMAN GREEN, Assistant Professor of Clinical Medicine  
B.A. (Stanford 1990); M.D. (South Alabama 2001) [2013]  
BRAD A. GREENBAUM, Clinical Professor of Pediatrics  
B.A. (Texas, Galveston 1991); M.D. (U.T Health Science Center [Tennessee] 1995) [1998]  
JOHN W. GREENE, Professor of Pediatrics, Emeritus  
ROBERT ALAN GREEVY, JR., Associate Professor of Biostatistics  
ANDREW J. M. GREGORY, Associate Professor of Orthopaedic Surgery and Rehabilitation; Associate Professor of Neurological Surgery; Associate Professor of Pediatrics  
B.S. (Indiana, Bloomington 1993); M.D. (Alabama, Birmingham 1997) [2001]  
DAMIAN IVANOVA GREY, Assistant Professor of Medicine  
B.S. (Tennessee 2003); M.D. (U.T Health Science Center [Tennessee] 2008) [2014]
MARY LUCIA PARTIN GREGORY, Assistant Professor of Clinical Pediatrics
B.S. (Alabama 1996); M.D. (Alabama, Birmingham 2000) [2014]

SHAWN A. GRAY, Associate Professor of Medicine
B.S. (Alabama 1994); M.D. (Virginia 1998); M.M.S. (Harvard Medical 2006) [2014]

BRUCE W. GREIG, Associate in Pathology, Microbiology and Immunology

JARED V. GRICE, Instructor in Radiology and Radiological Sciences
B.S. (Missouri, Saint Louis 2012); M.M.P., D.M.P. (Vanderbilt 2014, 2016) [2016]

CAROL A. GRIFFIN, Associate in Obstetrics and Gynecology

MARIE R. GRIFFIN, Professor of Health Policy; Professor of Medicine
A.B. (Immaculata 1972); M.D. (Georgetown 1976); M.P.H. (Johns Hopkins 1982) [1986]

DEBORAH GRIFFITH, Assistant in Medicine
B.A. (Texas 1996); B.S.N. (Arizona 2005); M.S.N. (Vanderbilt 2010) [2010]

DEREK MACGREGOR GRIFFITH, Associate Professor of Health and Society; Associate Professor of Medicine; Associate Professor of Health Policy
B.A. (Maryland 1993); M.A., Ph.D. (DePaul 1998, 2002) [2012]

MICHÈLLE L. GRIFFITH, Assistant Professor of Medicine
B.S. (Carnegie Mellon 2000); M.D. (Vanderbilt 2005) [2017]

CARLOS G. GRIMALDA, Assistant Professor of Health Policy

BARBARA J. GRIFFIT, Assistant in Medicine
B.A. (Transylvania 1974); M.A. (Eastern Kentucky 1978); B.S.N. (Waynesburg 1991); M.S.N. (Belmont 1995); RN, MSN, ACP (1999)

BARRY S. GRIFFIT, Assistant Professor of Clinical Obstetrics and Gynecology
D.O. (UPKE 2010) [2014]

WILLIAM A. GRISOM, Assistant Professor of Biomedical Engineering; Assistant Professor of Radiology and Radiological Sciences; Assistant Professor of Electrical Engineering

ERIC L. GROGAN, Associate Professor of Thoracic Surgery; Associate Professor of Emergency Medicine
B.S. (Lipscomb 1995); M.D., M.P.H. (Vanderbilt 1999, 2004) [2008]

THOMAS E. GROOMES, Associate Professor of Clinical Physical Medicine and Rehabilitation
B.S. (Vanderbilt 1983); M.D. (UT Health Science Center [Tennessee] 1987) [1994]

LUCAS LEE GROVES, Assistant Clinical Professor of Ophthalmology and Visual Sciences
B.S. (Tennessee 2008); M.D. (Uniformed Services 2012) [2017]

MARNI L. GROVES, Assistant in Medicine

BRAD A. GRUETTER, Assistant Professor of Anesthesiology; Assistant Professor of Molecular Physiology and Biophysics; Assistant Professor of Pharmacology; Assistant Professor of Psychiatry and Behavioral Sciences
B.S. (Illinois College 1998); M.S. (Illinois, Chicago 2001); Ph.D. (Vanderbilt 2006) [2012]

CARRIE A. GRUETTER, Research Assistant Professor of Anesthesiology
B.S. (Montevallo 1999); Ph.D. (Vanderbilt 2006) [2012]

MICHÈLLE S. GRUNDEY, Assistant Professor of Medical Education and Administration (VU); Director of Health Professions Advice
B.S., Ph.D. (Vanderbilt 1993, 2000) [2002]

EWA F. GRZEZOSZCZAK, Associate Professor of Clinical Radiology and Radiological Sciences
M.D. (Wroclaw Medical [Poland] 1984) [2000]

GUOQIANG GU, Associate Professor of Cell and Developmental Biology
B.S. (Jin [China] 1988); M.S. (Chinese Academy of Sciences 1991); Ph.D. (Columbia 1998) [2002]

SCOTT A. GUELCHER, Professor of Chemical and Biomolecular Engineering; Professor of Medicine; Professor of Biomedical Engineering
B.S. (Virginia Polytechnic Institute 1992); M.S. (Pittsburgh 1996); Ph.D. (Carnegie Mellon 1999) [2005]

F. PETER GUERRERICH, Tadashi Inagami, Ph.D. Chair in Biochemistry; Professor of Biochemistry
B.S. (Illinois, Champaign 1970); Ph.D. (Vanderbilt 1973) [1975]

RACHAEL G. GUICE, Clinical Instructor in Pediatrics
B.S. (Georgia 2007); M.D. (Medical College of Georgia 2012) [2015]

OSCAR D. GUILLAMONDEGUI, Professor of Surgery; Professor of Neurological Surgery; Professor of Hearing and Speech Sciences
B.A. (Dallas 1989); M.D. (Texas, Galveston 1993); M.P.H. (Vanderbilt 2010) [2003]

RICHARD JOSEPH GUMINA, Adjunct Associate Professor of Medicine; Adjunct Associate Professor of Pharmacology
B.S. (California, Davis 1988); Ph.D., M.D. (Medical College of Wisconsin 1996, 1997) [2013]

MARGARET A. GUNNING, Assistant Clinical Professor of Pediatrics

OLIVER J. GUNTER, Associate Professor of Surgery
B.S. (Georgia 1996); M.D. (Medical College of Georgia 2000); M.P.H. (Vanderbilt 2014) [2009]

XINGYI GUO, Assistant Professor of Medicine
B.S. (Anhui Science and Technology University [China] 2003); Ph.D. (Zhengjiang [China] 2008) [2013]

DEEPAK K. GUPTA, Assistant Professor of Medicine
B.S. (Emory 2001); M.D. (Ohio State 2005) [2013]

DINESH K. GUPTA, Assistant Clinical Professor of Medicine
M.D. (All India Institute of Medical Sciences ) [2017]

RAJNISH KUMAR GUPTA, Associate Professor of Anesthesiology

EUGENIA V. GUREVICH, Associate Professor of Pharmacology

VSEVLOD V. GUREVICH, Cornelius Vanderbilt Chair in Pharmacology; Professor of Ophthalmology and Visual Sciences; Professor of Pharmacology
M.S., B.S. (Moscow State [Russia] 1980, 1980); Ph.D. (Shemyakin Institute [Russia] 1990) [2001]

LARRY D. GURLEY, Clinical Instructor in Obstetrics and Gynecology
B.A. (Vanderbilt 1970); M.D. (UT Health Science Center [Tennessee] 1977) [1983]

MOLLIE Q. GURLEY, Assistant in Psychiatry and Behavioral Sciences
B.S.N. (Florida 2014); M.S.N. (Vanderbilt 2015) [2018]

SCOTT OSBORN GUTHRIE, Associate Professor of Clinical Pediatrics
B.A. (Lipscomb 1995); M.D. (East Tennessee State 1999) [2005]

DANIELLE GUTIERREZ, Research Assistant Professor of Biochemistry
B.S. (Long Island, Southampton 2004); Ph.D. (Medical University of South Carolina 2013) [2014]

ADAM GUTTENTAG, Associate Professor of Clinical Radiology and Radiological Sciences
B.S., M.D. (Pennsylvania 1980, 1985) [2014]

SUSAN H. GUTTENTAG, Julia Carell Stadler Chair in Pediatrics; Professor of Pediatrics
B.A. (Pennsylvania 1981); M.D. (Medical College of Pennsylvania 1985) [2014]

HARRY E. GWIRTSMAN, Associate Professor of Psychiatry and Behavioral Sciences
B.A. (Yale 1972); M.D. (Columbia 1976) [1995]

SCOTT OSBORN GUTHRIE, Associate Professor of Clinical Pediatrics
B.A. (Lipscomb 1995); M.D. (East Tennessee State 1999) [2005]

DAWID K. HAAKE, Research Assistant in Medicine
B.S. (South Florida 2005); M.D. (Miami [Florida] 2009) [2015]

DAVID W. HAAKE, Professor of Medicine; Professor of Pharmacology; Professor of Pathology, Microbiology and Immunology
A.B. (Indiana, Bloomington 1985); M.D. (Vanderbilt 1983) [1990]

KEVIN F. HAAKE, Associate Professor of Neurology

VOLKER H. HAAKE, Krick-Brooks Chair in Nephrology; Professor of Medicine; Professor of Molecular Physiology and Biophysics
M.D. (Johann Wolfgang Goethe [Germany] 1990) [2008]
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOLLY RENEE HANSON</td>
<td>Assistant Professor of Clinical Pediatrics</td>
<td>B.S. (Mt. Vernon Nazarene 2006); M.D. (Northeast Ohio Medical University [Ohio] 2010) [2016]</td>
</tr>
<tr>
<td>KATHERINE L. HANSON</td>
<td>Associate Professor of Clinical Medicine</td>
<td>B.S. (Cornell 1986); M.D. (Vanderbilt 1990) [1999]</td>
</tr>
<tr>
<td>DOUGLAS W. HANTO</td>
<td>Adjunct Professor of Surgery</td>
<td>B.A. (Saint Olaf 1973); M.D. (Arizona 1977); Ph.D. (Minnesota 1987); M.A. (Harvard 2003) [2014]</td>
</tr>
<tr>
<td>CHUAN-MING HAO</td>
<td>Adjunct Research Assistant Professor of Medicine</td>
<td>M.D., M.S. (Nantong Medical [China] 1982, 1987); Ph.D. (Shanghai Medical [China] 1990) [2000]</td>
</tr>
<tr>
<td>NORMAN CHANDLER HARDMAN</td>
<td>Assistant Professor of Clinical Medicine</td>
<td>B.S. (Georgia Institute of Technology 1981); M.D. (Medical College of Georgia 1985) [1993]</td>
</tr>
<tr>
<td>KLARISSA D. HARDY</td>
<td>Adjunct Professor of Pharmacology</td>
<td>B.S. (Jackson State 2006); Ph.D. (Vanderbilt 2011) [2013]</td>
</tr>
<tr>
<td>RAY HARGREAVES</td>
<td>Clinical Instructor in Surgery</td>
<td>B.A. (Franklin and Marshall ); M.D. (Vanderbilt 1985) [1992]</td>
</tr>
<tr>
<td>DONNALITA B. HARMON</td>
<td>Assistant in Medicine</td>
<td>B.S. (Tennessee State 1999); M.S.N. (Vanderbilt 2005) [2008]</td>
</tr>
<tr>
<td>JOEL G. HARDMAN</td>
<td>Professor of Pharmacology, Emeritus</td>
<td>M.A. (Georgia 1954, 1959); Ph.D. (Emory 1964) [1964]</td>
</tr>
<tr>
<td>FRANK E. HARRELL</td>
<td>Professor of Biostatistics</td>
<td>B.S. (North Carolina 1979) [1979]</td>
</tr>
<tr>
<td>SHELTON HARRELL</td>
<td>Assistant in Medicine</td>
<td>B.S. (Center 2007); M.S.N. (Vanderbilt 2010) [2010]</td>
</tr>
<tr>
<td>ELIZABETH U. HARRESON</td>
<td>Assistant Professor of Clinical Pediatrics</td>
<td>B.S. (Augusta State 1999); M.D. (Medical College of Georgia 2003); M.S.C.I. (Vanderbilt 2010) [2009]</td>
</tr>
<tr>
<td>PHILIP R. HARRESON</td>
<td>Assistant Professor of Clinical Medicine, Assistant Professor of Clinical Pediatrics</td>
<td>B.S. (Georgia College and State University 1987); M.D. (Medical College of Georgia 1999) [2006]</td>
</tr>
<tr>
<td>DEBORAH RHEA HARRINGTON</td>
<td>Assistant in Medicine</td>
<td>Diploma in Nursing (1979); A.A.S. (Roane State Community 2009); M.S.N. (Vanderbilt 2014) [2015]</td>
</tr>
<tr>
<td>BRYAN DAVID HARRIS</td>
<td>Assistant Professor of Medicine</td>
<td>B.S., M.D., M.P.H. (Vanderbilt 2005, 2009, 2016) [2016]</td>
</tr>
<tr>
<td>PAUL A. HARRIS</td>
<td>Professor of Biomedical Informatics, Professor of Biomedical Engineering</td>
<td>B.S. (Tennessee Technological 1987); M.S., Ph.D. (Vanderbilt 1993, 1996) [1999]</td>
</tr>
<tr>
<td>RAYMOND C. HARRIS</td>
<td>Ann and Roscoe R. Robinson Chair in Nephrology; Professor of Medicine; Professor of Molecular Physics and Biophysics; Director, Division of Nephrology</td>
<td>B.S. (Yale 1974); M.D. (Emory 1978) [1986]</td>
</tr>
<tr>
<td>THOMAS R. HARRIS</td>
<td>Orrin Henry Ingram Distinguished Professor of Engineering, Emeritus; Professor of Biomedical Engineering, Emeritus; Professor of Chemical Engineering, Emeritus; Professor of Medicine, Emeritus</td>
<td>B.S., M.S. (Texas A&amp;M 1958, 1962); Ph.D. (Tulane 1964); M.D. (Vanderbilt 1974) [1964]</td>
</tr>
<tr>
<td>VICKI S. HARRIS</td>
<td>Assistant Clinical Professor of Psychology and Human Development; Assistant Clinical Professor of Psychiatry and Behavioral Sciences</td>
<td>B.S. (SUUNY, Cortland 1984); M.S., Ph.D. (Pennsylvania State 1987, 1991) [1993]</td>
</tr>
<tr>
<td>LAURIE A. HARRIS-FORD</td>
<td>Associate Clinical Professor of Pediatrics</td>
<td>B.S., M.D. (Alabama, Birmingham 1985, 1989) [2005]</td>
</tr>
<tr>
<td>DAVID G. HARRISON</td>
<td>Betty and Jack Bailey Chair in Cardiology, Professor of Medicine; Professor of Molecular Physiology and Biophysics; Professor of Pharmacology; Director, Division of Clinical Pharmacology</td>
<td>B.S. (Alabama, Birmingham 1982); Ph.D. (East Tennessee State 1996) [2007]</td>
</tr>
<tr>
<td>TINA V. HARTERT</td>
<td>Lulu H. Owen Chair in Medicine; Professor of Medicine, Director, Center for Asthma and Environmental Sciences Research</td>
<td>A.B. (Brown 1985); M.D., M.P.H. (Vanderbilt 1990, 1998) [1998]</td>
</tr>
<tr>
<td>KATHERINE GRAY HARTLEY</td>
<td>Assistant Professor of Radiology and Radiological Sciences; Assistant Professor of Orthopaedic Surgery and Rehabilitation</td>
<td>B.A. (William and Mary 1999); M.D. (UT Health Science Center [Tennessee] 2003) [2010]</td>
</tr>
<tr>
<td>MARY KRISTEN HARTLEY</td>
<td>Assistant in Physical Medicine and Rehabilitation</td>
<td>B.S.N. (Middle Tennessee State 2007); M.S.N. (Vanderbilt 2012) [2016]</td>
</tr>
<tr>
<td>KATHERINE E. HARTMANN</td>
<td>Associate Dean for Clinical and Translational Scientist Development; Lucius E. Burch Chair of Reproductive Physiology and Family Planning; Professor of Obstetrics and Gynecology; Professor of Medicine; Deputy Director for the Institute of Medicine and Public Health</td>
<td>B.A., M.A., M.D. (Johns Hopkins 1986, 1992, 1992); Ph.D. (North Carolina 1999) [2006]</td>
</tr>
<tr>
<td>LARA F. BRATCHER HARVEY</td>
<td>Assistant Professor of Obstetrics and Gynecology</td>
<td>B.A. (South Carolina 2004); M.P.H., M.D. (Vanderbilt 2010, 2010) [2014]</td>
</tr>
<tr>
<td>SARAH M. HARVEY</td>
<td>Assistant Professor of Clinical Radiology and Radiological Sciences</td>
<td>B.S. (Memphis 1999); M.D. (UT Health Science Center [Tennessee] 2004) [2009]</td>
</tr>
<tr>
<td>STEPHEN T. HARVEY</td>
<td>Assistant Professor of Anesthesiology</td>
<td>B.S. (Milligan 1997); M.D. (UT Health Science Center [Tennessee] 2004) [2009]</td>
</tr>
<tr>
<td>LEAH H. HARWELL</td>
<td>Assistant in Anesthesiology</td>
<td>B.S.N. (Alabama, Birmingham 2008); M.S.N. (Alabama, Huntsville 2012) [2014]</td>
</tr>
<tr>
<td>FREDERICK R. HASHELTON</td>
<td>Professor of Biomedical Engineering, Professor of Ophthalmology and Visual Sciences</td>
<td>B.A. (Haverford 1969); Ph.D. (Pennsylvania 1981) [1989]</td>
</tr>
<tr>
<td>JOHN H. HASH</td>
<td>Professor of Microbiology and Immunology, Emeritus</td>
<td>B.S. (Roanoke 1949); M.S., Ph.D. (Virginia Polytechnic Institute 1955, 1957) [1964]</td>
</tr>
<tr>
<td>TRAVIS J. W. HASSELL</td>
<td>Assistant Professor of Neurology</td>
<td>B.S. (Missouri 2002); Ph.D. (Purdue 2010); M.D. (Indiana, Indianapolis 2012) [2016]</td>
</tr>
<tr>
<td>ALYSSA H. HASTY</td>
<td>Associate Dean for Faculty Development for Basic Sciences; Cornelius Vanderbilt Chair in Molecular Physiology and Biophysics; Professor of Molecular Physiology and Biophysics</td>
<td>B.S. (Tennessee Technological 1994); Ph.D. (Vanderbilt 1998) [2002]</td>
</tr>
<tr>
<td>LEON DUPREE HATCH III</td>
<td>Assistant Professor of Pediatrics</td>
<td>B.S., M.D. (Florida 2004, 2004); M.P.H. (Vanderbilt 2015) [2011]</td>
</tr>
<tr>
<td>ANGELA L. HATCHETT</td>
<td>Assistant in Neurological Surgery</td>
<td>B.A. (Agnes Scott 1982); M.S.W. (Georgia 1984); M.S.N. (Vanderbilt 2000) [2005]</td>
</tr>
</tbody>
</table>
JILL E. LAWTON HEAVRIN, Clinical Instructor in Emergency Medicine

JACEK J. HAWIGER, Distinguished Professor of Medicine; Louise B. ANNE B. HAWKINS, Assistant Clinical Professor of Pediatrics

ALEXANDER THARRINGTON HAWKINS, Assistant Professor of Surgery

CHARLES HOWARD HAUSMAN, Assistant Professor of Clinical Hearing

STEPHAN HECKERS, William P. and Henry B. Test Chair in Schizophrenia

STACY L. HAWKINS, Assistant in Pediatrics

WILLIAM JOHN HEERMAN, Assistant Professor of Pediatrics; Assistant PETER HEDERA, Associate Professor of Neurology

PETER HEDERA, Associate Professor of Neurology


WILLIAM JOHN HEERMAN, Assistant Professor of Pediatrics; Assistant

MARK G. HEIDEL, Assistant Clinical Professor of Radiology and Radiological Sciences

B.S. (2003); M.D. ( Meharry Medical 2009) [2014]
CASILDA I. HERMO, Associate Clinical Professor of Pediatrics  

ANTONIO HERNANDEZ, Associate Professor of Anesthesiology  
B.S. (Texas, El Paso 1995); M.D. (Texas, Galveston 1999) [2013]

MARTA HERNANZ-SCHULMAN, Professor of Radiology and Radiological Sciences; Professor of Pediatrics  

ALISON HERMOND, Assistant Professor of Clinical Pediatrics  
B.A. (Wooster 2003); M.P.H. (Colorado, Denver 2007); M.D. (Colorado 2011) [2015]

S. DUKE HERRELL III, Professor of Urologic Surgery; Professor of Mechanical Engineering; Professor of Biomedical Engineering  
B.A. (Richmond 1986); M.D. (Virginia 1990) [2001]

CATHERINE GALLERANI HERRINGTON, Assistant Clinical Professor of Psychiatry and Behavioral Sciences  

HEATHER WALLER HERRMANN, Assistant in Medicine  
B.A. (Vanderbilt 1995); M.S. (Pittsburgh 2000) [2016]

PAULA C. HERRMANN, Assistant Professor of Clinical Medicine  
B.S. (South Carolina 1999); M.D. (Medical University of South Carolina 2003) [2007]

DOUGLAS L. HESTER, Associate Professor of Anesthesiology  
A.B. (Georgia 1999); M.D. (Medical College of Georgia 2004) [2008]

AMANDA C. HICKLIN, Assistant in Neurology  
A.A.S. (Iowa Western Community 1989); M.S.N. (Vanderbilt 2012) [2017]

ADAM HICKS, Senior Associate in Orthopaedic Surgery and Rehabilitation  
B.Med.Sc. (Auburn 2002); D.P.M. (Des Moines University 2006) [2014]

CANDI G. HICKS, Assistant in Neurological Surgery  
B.S. (Austin Peay State 2010); M.S. (Vanderbilt 2016) [2016]

GERALD B. HICKSON, Joseph C. Ross Chair in Medical Education and Administration; Professor of Medical Education and Administration; Professor of Pediatrics; Adjunct Professor of Nursing  
B.S. (Georgia 1973); M.D. (Tulane 1978) [1982]

SCOTT W. HIEBERT, Hortense B. Ingram Chair in Cancer Research; Professor of Biochemistry; Associate Professor of Medicine  

NICHOLAS S. D. HIGBY, Assistant Professor of Clinical Pediatrics  
B.S., M.D. (Ohio State 2001, 2005) [2011]

KENT K. HIGDON, Associate Professor of Plastic Surgery  
B.S. (Alabama 1998); M.D. (Mississippi 2002) [2012]

JAMES N. HIGGINBOTHAM, Research Instructor in Medicine  

MICHAEL S. HIGGINS, Professor of Anesthesiology  
B.S. (Lewis and Clark 1984); M.M.P.H. (Vanderbilt 1989, 1999) [1994]

R. KEVIN HIGH, Senior Associate in Emergency Medicine  
B.S. (University of the State of New York–Regents College 1992); Ph.D. (Columbus State 2000); M.H.E. (Vanderbilt 2013) [2007]

GEORGE C. HILL, Distinguished Professor of Molecular Physiology and Biophysics; Professor of Medical Education and Administration, Emeritus; Professor of Pathology, Microbiology and Immunology, Emeritus  
B.A. (Rutgers, Camden 1961); M.S. (Howard 1963); Ph.D. (New York 1967) [2002]

MICHAEL F. HILL, Adjunct Associate Professor of Medicine  

TIFFANY P. HILL, Associate Clinical Professor of Pediatrics  
B.A. (Boston University 1990); M.S., M.D. (Chicago 1994, 1994) [2006]

TRACY JANEEN HILLS, Assistant Professor of Clinical Pediatrics  
B.A. (Bryn Mawr 2004); D.O. (Philadelphia College of Osteopathic Medicine 2012) [2016]

MELISSA A. HILMES, Assistant Professor of Radiology and Radiological Sciences; Assistant Professor of Pediatrics  
B.S., M.D. (Vanderbilt 1996, 2000) [2007]

HEATHER LIMPER HIMELHOCH, Research Assistant Professor of Medicine  
B.S. (Georgia 2008); M.P.H., Ph.D. (Illinois, Chicago 2010, 2016) [2016]

DANIEL P. HINES, Assistant Professor of Emergency Medicine; Assistant Professor of Pediatrics  
B.S. (Wheaton 1989); M.D. (Wake Forest 1993) [1996]

LAUREN E. HIMMEL, Assistant Professor of Pathology, Microbiology and Immunology  

JEFFREY F. HINE, Assistant Professor of Pediatrics  
B.A. (California, Santa Barbara 2002); M.Ed. (Vanderbilt 2005); Ph.D. (Georgia 2014) [2015]

Tiffani Elder Hines, Assistant Professor of Pediatrics; Assistant Professor of Medicine  
B.S. (Auburn 1991); M.D. (South Alabama 1995) [2012]

ALICE A. HINTON, Associate Professor of Clinical Radiology and Radiological Sciences  
B.S. (Tulane 1976); M.D. (Vanderbilt 1982) [2003]

TIMOTHY JOHN HINTON, Assistant Professor of Clinical Medicine  
B.S. (Harding 1997); M.D. (Maryland, Baltimore 2002) [2005]

JIBRIL HIRBO, Research Instructor in Medicine  
B.A. (Nairobi [Kenya] 1998); Ph.D. (Maryland 2011) [2014]

GIRISH SHANKER HIREMATH, Assistant Professor of Pediatrics; Assistant Professor of Biomedical Engineering  
M.S., B.S. (Veer Surendra Sai Medical College [India] 1994); M.P.H. (Johns Hopkins 2004) [2015]

M. BRUCE HIRSOCH, Clinical Instructor in Obstetrics and Gynecology  
B.S. (Georgia, Thomasville 1975); M.D. (Alabama, Birmingham 1980) [1984]

RICHARD H. HO, Associate Professor of Pediatrics  

ASHLEY BARKER HOADLEY, Assistant in Medicine  
A.S.N. (Columbia State Community 2003); B.S.N. (Middle Tennessee State 2006); M.S.N. (Belmont 2011) [2015]

MICHAEL HOCMAN, Assistant Professor of Obstetrics and Gynecology  
B.A. (Rutgers 1984); M.D. (Florida 1988) [2016]

TRINITY JOY HOCHSTETLER, Assistant in Pediatrics  
B.S. (Centre 2012); M.S.N. (Vanderbilt 2014) [2017]

RICHARD L. HOCK, Assistant Professor of Clinical Medicine  
A.B. (Dartmouth 1983); M.D. (Vanderbilt 1987) [1995]

KYLE M. HOCKING, Research Assistant Professor of Surgery  

EMILY C. HODGES, Assistant Professor of Biochemistry  
B.A. (Rhodes College 1998); Ph.D. (Karolinska Institute [Sweden] 2006) [2015]

KATHERINE HOEY, Assistant Clinical Professor of Pediatrics  
B.A. (California, Los Angeles 2005); M.D. (Virginia 2010) [2014]

ROBERT D. HOFFMAN II, Associate Professor of Pathology, Microbiology and Immunology  

TIMOTHY JAMES HOFMAN Assistant Professor of Neurology  

GEORGE W. HOLCOMB, Jr., Clinical Professor of Pediatric Surgery, Emeritus  
B.A., M.D. (Vanderbilt 1943, 1946) [1954]

EMILY WATKINS HOLCOMBE, Assistant in Anesthesiology  
B.S.N. (Auburn 2005); M.S.N. (Vanderbilt 2010) [2011]

RICHARD J. HOLDEN, Adjunct Assistant Professor of Biomedical Informatics  

LYNN HOLLIDAY, Assistant Professor of Clinical Medicine; Assistant Professor of Clinical Pediatrics  
B.S., M.D. (Vanderbilt 2003, 2007) [2014]

STEVEN D. HOLLON, Gertrude Conway Vanderbilt Chair in Social and Natural Sciences; Professor of Psychology; Professor of Psychiatry and Behavioral Sciences  
B.A. (George Washington 1971); M.S., Ph.D. (Florida State 1974, 1977) [1985]

LEAH HOLMES, Assistant in Pediatrics  
B.S.N. (Cumberland 2011); M.S.N. (North Park 2017) [2017]
DAVID A. ISAACS, Assistant Professor of Neurology; Assistant Professor of Pediatrics  
B.S. (Southern Indiana 2007); M.D. (Indiana, Indianapolis 2011) [2015]  
NUHAD M. ISMAIL, Associate Professor of Clinical Medicine  
DAWN A. ISRAEL, Research Assistant Professor of Medicine  
B.S., Ph.D. (Alabama, Birmingham 1988, 1994) [2000]  
HANA AHMAD ITANI, Adjunct Instructor in Medicine  
B.Sc. (Lebanese American [Lebanon] 1999); Ph.D. (Iowa 2008) [2016]  
RISSA PRYSE IVENS, Assistant Clinical Professor of Psychiatry and Behavioral Sciences  
B.A. (Washington University 2008); M.D. (UT Health Science Center [Tennessee] 2013) [2017]  
TINA M. IVERSON, Professor of Pharmacology; Professor of Biochemistry  
B.S. (St. John's 1995); Ph.D. (California Institute of Technology 2000) [2005]  
STEPHANIE BROOKS IVEY, Assistant in Anesthesiology  
B.S.N. (Belmont 2011); M.S.N. (Alabama, Huntsville 2015) [2016]  
SHAGUFTA JABEEN, Clinical Associate Professor of Psychiatry and Behavioral Sciences  
M.B.B.S. (Fatimah Jinnah Medical College, Lahore [Pakistan] 1986) [2011]  
KATHY JABS, Associate Professor of Pediatrics  
B.S. (Trinity College [Connecticut] 1978); M.D. (Columbia 1982) [2000]  
ELIZABETH JACKSON, Assistant Clinical Professor of Oral and Maxillofacial Surgery  
B.S. (Auburn 2003); D.M.D. (Alabama, Birmingham 2007) [2016]  
GRETCHEN PURCELL JACKSON, Associate Professor of Pediatric Surgery; Associate Professor of Pediatrics; Associate Professor of Biomedical Informatics  
HEATHER J. JACKSON, Assistant in Anesthesiology  
B.S.N. (Alabama, Birmingham 2003); M.S.N. (Middle Tennessee State 2009) [2011]  
JAMES C. JACKSON, Research Associate Professor of Medicine; Research Associate Professor of Psychiatry and Behavioral Sciences  
B.S. (Liberty 1991); M.A. (Georgia Professional School of Psychology 1993); M.A., Psy.D. (Biola 1998, 2001) [2003]  
LAUREN PARKER JACKSON, Assistant Professor of Biological Sciences; Assistant Professor of Biochemistry  
TRACY P. JACKSON, Associate Professor of Anesthesiology  
J. KENNETH JACOBS, Professor of Surgery, Emeritus  
B.A. (Vanderbilt 1950); M.D. (Northwestern 1954) [1994]  
MONICA L. JACOB, Assistant Professor of Clinical Psychiatry and Behavioral Sciences; Assistant Professor of Clinical Neurology  
B.S. (Georgia 1997); M.S., Psy.D. (Georgia Professional School of Psychology 2001, 2005) [2007]  
SKYLER GRACE JACOBS, Assistant in Psychiatry and Behavioral Sciences  
B.S. (Peabody 2011); M.S. (Vanderbilt 2013) [2016]  
BARBARA H. JACOBSON, Associate Professor of Hearing and Speech Sciences; Associate Professor of Otalaryngology  
DAVID AARON JACOBSON, Associate Professor of Molecular Physiology and Biophysics  
B.S. (Washington State 1995); Ph.D. (Oregon Health and Science 2003) [2010]  
GARY P. JACOBSON, Professor of Hearing and Speech Sciences  
B.A. (California State, Fullerton 1974); M.S. (Wisconsin 1975); Ph.D. (Kent State 1978) [2003]  
HARRY R. JACOBSON, Professor of Medicine, Emeritus  
B.S. (Illinois, Champaign 1969); M.D. (Illinois, College of Medicine, Champaign 1972) [1985]  
LISA M. JAEGGER, Assistant Professor of Clinical Anesthesiology  
B.S. (Ohio Northern 2002); M.D. (Toledo 2006) [2010]  
MADAN JAGASIA, Professor of Medicine  
B.S. (Ranirain Ruia College [India] 1986); M.B.B.S. (King Edward Memorial [India] 1992); M.S.C.I. (Vanderbilt 2006) [2001]  
SHUBHADA JAGASIA, Professor of Medicine  
B.S. (Ruparel College [India] 1986); M.D. (Seth G.S. Medical [India] 1992); M.Mgt. (Vanderbilt 2012) [2001]  
AMIR ALEX JAHANGIR, Associate Professor of Orthopaedic Surgery and Rehabilitation  
B.S. (George Washington 1999); M.D. (UT Health Science Center [Tennessee] 2003); M.Mgt. (Vanderbilt 2012) [2009]  
NITIN B. JAIN, Associate Professor of Physical Medicine and Rehabilitation; Associate Professor of Orthopaedic Surgery and Rehabilitation; Associate Professor of Medicine  
M.D.B.S. (Maharaja Sayajirao [India] 1999); M.S.P.H. (North Carolina 2002) [2014]  
KATHRYN ECKSTEIN JALOVEC, Assistant Clinical Professor of Psychiatry and Behavioral Sciences  
B.S. (Northwestern 2001); M.D. (Tennessee, Memphis 2005) [2012]  
KAITLIN J. JAMES, Assistant Professor of Pediatrics  
B.A. (Oberlin 2001); M.D. (Vanderbilt 2006) [2012]  
SAMUEL D. JAMES, Assistant Professor of Pathology, Meharry; Assistant Professor of Pathology, Microbiology and Immunology  
B.S. (Morehouse 2003); M.D. (Meharry Medical 2006) [2015]  
E. DUCO JANSEN, Associate Dean for Graduate Studies; Professor of Biomedical Engineering; Professor of Neurosurgical Surgery  
VALERIE MALYVANH JANSEN, Adjunct Instructor in Medicine  
B.A. (Maryville 2001); Ph.D. (UT Health Science Center [Tennessee] 2009); M.D. (Chicago 2010) [2016]  
DANA R. JANSSEN, Assistant Professor of Pediatrics  
BARRY K. JARNAGIN, Adjunct Associate Professor of Nursing; Associate Clinical Professor of Obstetrics and Gynecology  
SARAH SANDERS JASER, Associate Professor of Pediatrics  
B.S. (Yale 1995); M.S., Ph.D. (Vanderbilt 2003, 2006) [2012]  
ASHWATH JAYAGOPAL, Adjunct Assistant Professor of Opthalmology and Visual Sciences  
JENNIFER E. JAYARAM, Assistant in Anesthesiology  
B.S. (Tennessee 2001); M.S. (Colorado, Denver 2003) [2008]  
GAUTAM JAYARAM, Assistant Clinical Professor of Urologic Surgery  
B.A. (Washington University 2002); M.D. (Vanderbilt 2006) [2017]  
SUSAN BURCH JEANSONNE, Assistant in Surgery  
B.S., M.S. (Tulane 2009, 2010); M.S.N. (Vanderbilt 2012) [2012]  
AARON SLOANE JEECKELL, Assistant Professor of Psychiatry and Behavioral Sciences  
B.A. (Florida 2007); M.D. (South Florida 2012) [2017]  
ANGELA L. JEFFERSON, Professor of Neurology; Professor of Medicine  
B.A. (Lynchburg 1997); M.A. (Loyola College [Maryland] 2000); Ph.D. (Drexel 2003) [2012]  
JENNIFER JEHROY-BUTLER, Assistant Clinical Professor of Pediatrics  
B.S. (Miami 1988); M.D. (South Florida 1993) [2012]  
WILLIAM J. JENKINS, Assistant Clinical Professor of Radiology and Radiological Sciences  
B.S. (Alabama 2002); M.D. (Alabama, Birmingham 2006) [2011]  
ABIGAIL L. JENNINGS, Clinical Instructor in Pediatrics  
B.S. (Lipscomb 2004); M.D. (East Tennessee State 2010) [2013]  
BRUCE JENNINGS, Adjunct Professor of Health Policy  
B.A. (Yale 1971); M.A. (Princeton 1973) [2014]  
HENRY S. JENNINGS III, Assistant Professor of Medicine  
B.S. (Davidson 1973); M.D. (Vanderbilt 1977) [2007]  
W. GRAY JEROME III, Associate Professor of Pathology, Microbiology and Immunology  
B.A. (St. Andrews Presbyterian 1971); M.S. (Northeastern 1974); Ph.D. (Virginia 1981) [2001]
NANCY B. LIPSITZ, Assistant Clinical Professor of Obstetrics and Gynecology
B.A. (Brown 1987); M.D. (Rochester 1993) [1998]

MATTHEW DAVID LIPTON, Assistant Professor of Emergency Medicine
B.S. (California, San Diego 2006); M.D. (Northwestern 2010) [2015]

LOREN P. LIPWORTH, Research Professor of Medicine

MICHAEL R. LISKE, Clinical Professor of Pediatrics
B.S. (Oral Roberts 1984); M.D. (Michigan) [1999] [2003]

ROLANDA LAMORA LISTER, Assistant Professor of Obstetrics and Gynecology
B.S. (Oakwood 2002); M.D. (Meharry Medical) [2006] [2016]

JOSEPH A. LITTLE III, Assistant Clinical Professor of Pediatrics

DANDAN LIU, Assistant Professor of Biostatistics
B.S. (Fudan [China] 2002); M.A. (Missouri) [2005]; Ph.D. (Michigan) [2010] [2011]

QI LIU, Assistant Professor of Biostatistics
B.S. (Purdue 1999); M.A. (Missouri 2005); Ph.D. (Michigan) [2010] [2011]

YAN X. LIU, Assistant Professor of Medicine
B.S. (Illinois, School of Nursing) [2007]; Sc.B. (Brown) [2013] [2015]

VALENTINA LO, Assistant Clinical Professor of Medicine
B.A. (Colorado College 1964); M.D. (South Alabama 1983) [1998]

YILUN YU, Associate Professor of Clinical Obstetrics and Gynecology
B.S. (Baylor 2000); M.D. [2004] [2010]

FREDERIC WILHELM LOMBARD, Associate Professor of Obstetrics and Gynecology
B.S. (West Virginia 1969, 1973) [1983]

RICHARD R. LOTSHAW, Assistant Clinical Professor of Obstetrics and Gynecology
B.S. (West Virginia State 1981); M.D. (West Virginia 1988) [2003]

ASHLEY D. LOVE, Assistant in Pediatrics
B.A. (Texas A&M 2006); M.Ed. (Vanderbilt) [2013] [2017]

REID LONGMUIR, Assistant Professor of Ophthalmology and Visual Sciences
B.S., M.D. (Iowa 1998, 2002) [2014]

PETER T. LOOSEN, Professor of Psychiatry, Emeritus

CARLOS F. LOPEZ, Assistant Professor of Biochemistry; Assistant Professor of Pharmacology
B.S. (Miami 1998); Ph.D. (Pennsylvania 2004) [2012]

CARLOS GABRIEL LOPEZ, Assistant Professor of Anesthesiology
B.S. (Trinity [Texas] 2006); M.S. (Mayo Graduate School [MN]) [2010]; M.D. (Mayo Clinic) [2011] [2016]

ASHLEY J. LORD, Assistant in Medicine
B.S.N. (Clemson 2003); M.S.N. (Vanderbilt 2010) [2010]

NANCY M. LORENZI, Professor of Biomedical Informatics; Adjunct Professor of Nursing
A.B. (Youngstown State 1966); M.S. (Case Western Reserve 1968); M.A. (Louisville 1975); Ph.D. (Cincinnati 1980) [2001]

AMANDA N. LORINC, Assistant Professor of Anesthesiology
B.S. (Georgia 2001); M.D. (Medical College of Georgia) [2007] [2012]

WHITNEY A. LORING, Assistant Professor of Pediatrics; Assistant Professor of Psychiatry and Behavioral Sciences
B.S. (Florida 2002); M.A. (Argosy 2005); Psy.D. (Georgia Professional School of Psychology) [2008] [2011]

RICHARD R. LOTSHAW, Assistant Clinical Professor of Obstetrics and Gynecology
B.S. (Ohio State 1981); M.D. (West Virginia) [2014] [2018]
HAOXIANG LUO, Associate Professor of Mechanical Engineering; Associate Professor of Otolaryngology; Associate Chair of Mechanical Engineering
B.S., M.S. (Taihu University [China] 1996, 1999); Ph.D. (California, San Diego 2004) [2007]

WEIFENG LUO, Research Instructor in Medicine
B. (Xinjiang Medical College [China] 1986); M.S. (Henan Medical [China] 1995); Ph.D. (Chinese Academy of Preventive Medicine 2001) [2014]

WENTIAN LUO, Research Assistant Professor of Medicine
B.S. (Shanghai Medical [China] 1982); M.D. (Xi'an Medical [China] 1990); Ph.D. (Nagasaki [Japan] 1997) [2000]

YU LUO, Assistant Professor of Radiology and Radiological Sciences

MARK LUSCO, Assistant Professor of Pathology, Microbiology and Immunology
B.S., M.D. (Alabama, Birmingham 1993, 2001) [2014]

MELANIE LUTENBACHER, Associate Professor of Nursing; Associate Professor of Pediatrics
B.S.N. (Texas 1974); M.S.N. (California State 1986); Ph.D. (Kentucky, Lexington 1994) [1993]

JAMES M. LUTHER, Associate Professor of Medicine; Associate Professor of Pharmacology
B.S. (Lipscomb 1997); M.D., M.S.C.J. (Vanderbilt 2001, 2006) [2008]

HUNG N. LUU, Adjunct Assistant Professor of Medicine
M.D. (1997); M.P.H. (Tulane 2003); Ph.D. (Texas, Houston 2011) [2016]

CINDY K. LYBARGER, Assistant Professor of Pediatrics
B.S.N. (Evansville 1979); M.S.N. (Vanderbilt 1990); MSN,PNP [1991]

TERRY P. LYBRAND, Professor of Chemistry; Professor of Pharmacology
B.S. (South Carolina 1980); Ph.D. (California, San Francisco 1984) [2000]

AMOSY E. M`KOMA, Associate Professor of Biochemistry and Cancer Biology at Meharry Medical College; Adjunct Associate Professor of Surgery at Vanderbilt University School of Medicine
M.D. (Kharkov Medical Institute [Ukraine] 1984); Licentiate Diploma, Ph.D. (Karolinska Institute [Sweden] 1999, 2001) [2007]

IAN G. MACARA, Louise B. McGavock Chair; Professor of Cell and Developmental Biology; Chair of the Department of Cell and Developmental Biology

ROBERT L. MACDONALD, Professor of Neurology; Professor of Molecular Physiology and Biophysics; Professor of Pharmacology
S.B. (Massachusetts Institute of Technology 1966); Ph.D., M.D. (Virginia 1969, 1973) [2001]

JAMES R. MACDONALD, Assistant Professor of Clinical Medicine; Assistant Professor of Clinical Pediatrics

RACHEL LENOX MACE, Associate Professor of Clinical Pediatrics
B.S. (Purdue 1982); M.D. (Vanderbilt 1986) [1989]

JOHN W. MACEY, Jr., Clinical Instructor in Obstetrics and Gynecology

JASON MAGGURN, Assistant Professor of Cell and Developmental Biology
B.A. (Chicago 2000); Ph.D. (California, San Francisco 2007) [2013]

MEENAKSHI S. MADHUR, Assistant Professor of Medicine; Assistant Professor of Molecular Physiology and Biophysics
B.S. (Duke 1996); Ph.D., M.D. (Virginia 2003, 2005) [2012]

MARK A. MAGNUSON, Professor of Molecular Physiology and Biophysics; Professor of Medicine; Professor of Cell and Developmental Biology
B.A. (Luther 1975); M.D. (Iowa 1979) [1987]

ANITA MAHADEVAN-JANSEN, Orrin H. Ingram Chair in Biomedical Engineering; Professor of Biomedical Engineering; Professor of Neurological Surgery; Director of Undergraduate Studies in Biomedical Engineering

EDWARD R. MAHARAM, Assistant Professor of Clinical Medicine
B.S. (Southern California 2008); M.D. (Florida International 2013) [2017]

ALEXANDER MAIER, Assistant Professor of Psychology; Assistant Professor of Ophthalmology and Visual Sciences

ROSEANN MAIKIS, Clinical Instructor in Obstetrics and Gynecology
B.S. (Boston College 1992); M.D. (Stony Brook 1996) [2000]

NATHALIE L. MAITRE, Adjunct Associate Professor of Hearing and Speech Sciences
M.A., B.A. (Boston University 1990, 1996); Ph.D., M.D. (Medical University of South Carolina 1997, 2002) [2008]

SUSAN M. KRISINSKI MAJKA, Associate Professor of Medicine; Associate Professor of Pathology, Microbiology and Immunology; Associate Professor of Cell and Developmental Biology
B.S. (Rutgers 1992); Ph.D. (New Mexico 1997) [2012]

AMY S. MAJOR, Associate Professor of Medicine; Associate Professor of Pathology, Microbiology and Immunology
B.S. (Wheeling Jesuit 1991); Ph.D. (West Virginia 1998) [2002]

SARAH MAJSTORAVICH, Assistant Professor of Clinical Pediatrics
B.S. (North Carolina 2002); M.D. (East Carolina 2008) [2016]

RANDALL J. MALCHOW, Associate Professor of Clinical Anesthesiology
B.S. (U.S. Military Academy 1983); M.D. (Wisconsin 1987) [2008]

ARNOLD W. MALCOLM, Adjunct Professor of Radiation Oncology
B.A. (Kent State 1969); M.D. (Miami 1973, 2000) [2003]

FABIEN MALDONADO, Associate Professor of Medicine; Associate Professor of Mechanical Engineering; Associate Professor of Thoracic Surgery
M.D. (Bourgogne [France] 2002) [2015]

CHRISTOPHER T. MALEY, Assistant Professor of Clinical Psychiatry and Behavioral Sciences
B.A. (Memphis 1994); M.D. (UT Health Science Center [Tennessee] 2006) [2010]

MEGAN FRANCES MALIK, Assistant Professor of Clinical Pediatrics
B.S. (John Carroll 2004); M.D. (Toledo 2008) [2014]

BRADLEY ADAM MALIN, Professor of Biomedical Informatics; Professor of Computer Science; Associate Professor of Biostatistics

SIMON A. MALLAL, Major E.B. Stahlman Chair in Infectious Diseases and Inflammation; Professor of Pathology, Microbiology and Immunology; Professor of Medicine
M.B.B.S. (Western Australia 1983) [2013]

ROBERT E. MALLARD, Clinical Professor of Pediatrics
B.A. (Rochester 1971); M.D. (Vanderbilt 1974) [1977]

JACK DANIEL MALLEETTE, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.S. (Middle Tennessee State 2000); D.D.S. (U.S. Health Science Center [Tennessee] 2005) [2015]

NASREEN MALLIK, Assistant Clinical Professor of Psychiatry and Behavioral Sciences
M.B.B.S. (Jawaharlal Nehru [India] 1989) [2004]

HANNAH M. MALONEY, Assistant in Anesthesiology
B.S. (Cornell 1999); M.S.N. (Vanderbilt 2010) [2011]

BETH ANN MALOW, Burry Chair in Cognitive Childhood Development; Professor of Neurology; Professor of Pediatrics
B.S., M.D. (Northwestern 1984, 1988); M.S. (Michigan 1997) [2003]

BRAD E. MALTZ, Assistant Professor of Clinical Medicine
B.S. (Florida Atlantic 1996); M.D. (Miami 2003) [2006]

RAVINDER REDDY MANDA, Assistant Professor of Clinical Medicine
M.D. (Kakatiya [India] 1990) [2009]

TIMOTHY C. MANGRUM, Clinical Professor of Pediatrics
B.S. (Lipscomb 1990); M.D. (Tennessee 1994) [1998]

MICHAEL LESLIE MANN, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.S. (Fairleigh Dickinson 1968); D.D.S. (Temple 1972) [2018]
H. CHARLES MANNING, Professor of Radiology and Radiological Sciences; Professor of Chemistry; Professor of Biomedical Engineering; Professor of Neurological Surgery; Ingram Associate Professor of Cancer Research
B.Sc. (Tarleton State 2000); Ph.D. (Texas Tech University 2004) [2008]

JOHN F. MANNING, JR., Assistant Professor of Medical Education and Administration; Chief Operating Officer, Corporate Chief of Staff
B.S. (Worcester Polytechnic Institute 1980); Ph.D. (Notre Dame 1986); M.B.A. (Chicago 1997) [2004]

LINDA G. MANNING, Assistant Professor of Physical Medicine and Rehabilitation; Assistant Professor of Clinical Psychiatry and Behavioral Sciences
B.S., Ph.D. (Texas 1977, 1988) [1998]

KYLE MANNION, Assistant Professor of Otolaryngology
B.S. (North Carolina 1997); M.D. (Connecticut 2002) [2007]

PALLAVI MANRAL, Research Instructor in Surgery
Ph.D. (All India Institute of Medical Sciences 2011) [2016]

TINA MANSHADI, Assistant Professor of Clinical Pediatrics
B.S. (Texas 2008); M.D. (Baylor 2012) [2016]

VARTGEZ MANSOURIAN, Assistant Professor of Clinical Physical Medicine and Rehabilitation
B.S., B.S. (Georgia State 1981, 1982); M.D. (Medical College of Georgia 1988) [2016]

KALPANA MANTHIRAM, Adjunct Assistant Professor of Pediatrics
B.S. (Texas 2005); M.D. (Texas, Southwestern Medical 2009); M.S.C.L. (Vanderbilt 2015) [2016]

MUDOLA VUHANDALI MANYANO, Adjunct Assistant Professor of Anesthesiology

KEVIN M. MAQUILING, Assistant Professor of Clinical Medicine
B.A. (Pennsylvania 1987); M.D. (Rush 1991) [2011]

CHARLES T. MARCRUM II, Assistant in Neurological Surgery
B.A. (Vanderbilt 2008); M.A. (Harvard 2011); Master of Medicine (Lincoln Memorial 2014) [2017]

TRACI MARCRUM, Assistant in Cardiac Surgery
B.S.N. (East Tennessee State 2001); M.S. (California, San Francisco 2011) [2016]

STEVEN RONALD MARCUM, Assistant Professor of Clinical Anesthesiology
B.S. (Colorado State 1979); M.D. (New York Medical 1989) [2018]

RAMZI MARDAM BEY, Assistant Professor of Psychiatry and Behavioral Sciences

MELINDA H. MARKHAM, Associate Professor of Clinical Pediatrics
B.A. (Hendrix 1992); M.D. (Arkansas 1996) [2007]

TIFANNIE MARKUS, Research Assistant Professor of Health Policy

AIMEE W. MARLAR, Assistant in Anesthesiology
B.S. (Auburn 2000); M.S. (Trevecca Nazarene 2012) [2012]

LAWRENCE J. MARNETT, Dean of Basic Sciences; University Professor of Biochemistry and Chemistry; Professor of Chemistry; Professor of Pharmacology
B.S. (Rockhurst 1969); Ph.D. (Duke 1973) [1989]

SAMUEL R. MARNEY, JR., Associate Professor of Medicine, Emeritus

RENE MAROIS, Professor of Psychology; Professor of Radiology and Radiological Sciences; Chair of Psychology
B.S. (McGill [Canada] 1986); M.S. (Dalhousie [Canada] 1989); Ph.D. (Yale 1996) [1999]

KRISTIN EHST MARTEL, Assistant Clinical Professor of Pediatrics
B.S., M.D. (Vanderbilt 1999, 2003) [2007]

GLENROY DEAN A. MARTIN, Adjunct Assistant Professor of Chemistry; Adjunct Assistant Professor of Pharmacology

KELSEY PALM MARTIN, Assistant in Medicine
B.S.N. (Lincoln Memorial 2011); M.S.N. (Alabama, Huntsville 2017) [2018]

MARIE H. MARTIN, Research Assistant Professor of Health Policy
B.A., M.Ed. (Vanderbilt 1995, 2006); Ph.D. (Tennessee State 2016) [2016]

PETER R. MARTIN, Professor of Psychiatry and Behavioral Sciences; Professor of Pharmacology

RAYMOND S. MARTIN III, Associate Clinical Professor of Surgery at St. Thomas Medical Center
B.A. (Vanderbilt 1972); M.D. (Johns Hopkins 1976) [1987]

RITA MANRY MARTIN, Assistant in Surgery
B.A. (University of the South 2003); M.S.N. (Vanderbilt 2009) [2011]

SARA F. MARTIN, Assistant Professor of Medicine

T. JOHN MARTIN, Adjunct Research Professor of Medicine

WILLIAM P. MARTIN, Assistant in Pediatrics
B.S. (Saint Joseph’s, Philadelphia 2012); M.Ed. (Pittsburgh 2014) [2016]

J. ANDRES MATERINEZ, Assistant Professor of Clinical Pediatrics
B.S., M.D. (South Alabama 1995, 1999) [2003]

WILLIAM MATERINEZ, Assistant Professor of Medicine
A.B. (Dartmouth 1999); M.S. (California, Berkeley 2005); M.D. (California, San Francisco 2007) [2013]

JEFFREY E. MARTUS, Associate Professor of Orthopaedic Surgery and Rehabilitation

DAMIAN MASEDA, Research Instructor in Pathology, Microbiology and Immunology

DEBBIE A. MASEMER, Assistant in Neurological Surgery
B.S.N. (Middle Tennessee State 2000); M.S.N. (Vanderbilt 2006) [2011]

EMILY F. MAISON, Assistant Professor of Pathology, Microbiology and Immunology

FRANK M. MAISON, Research Assistant Professor of Medicine
B.S. (Tennessee 2004); Ph.D. (Duke 2011) [2016]

LEILANI M. MAISON, Assistant Professor of Clinical Obstetrics and Gynecology
B.S. (Alverno 1998); M.S.N. (Marquette 2001) [2000]

WENDI MAISON, Assistant in Medicine
B.S.N. (Tennessee State 1996); M.S.N. (Vanderbilt 2003) [2013]

PIERRE P. MASSION, Cornelius Vanderbilt Chair in Medicine; Professor of Medicine
B.S., M.D. (Université Catholique de Louvain [Belgium] 1983, 1987) [2001]

KELLEY J. MAST, Assistant Professor of Pathology, Microbiology and Immunology
B.S. (Kent State 2001); M.D. (Northeastern Ohio Universities 2005) [2014]

RYOTA MASUZAKI, Research Assistant Professor of Surgery

DORA SZTIPANOVITS MATHE, Assistant Professor of Clinical Ophthalmology and Visual Sciences
B.S. (Washington University 2002); M.S. (Vanderbilt 2004); O.D. (California, Berkeley 2008) [2011]

LESLEE NISSING MATHENY, Assistant Professor of Medicine
B.S. (North Carolina 2006); M.D. (Louisiana State 2011) [2016]

MICHAEL E. MATHENY, Associate Professor of Biomedical Informatics; Associate Professor of Biostatistics; Associate Professor of Medicine
B.S., M.D. (Kentucky, Lexington 1997, 2001); M.S. (Massachusetts Institute of Technology 2006); M.P.H. (Harvard 2007) [2007]

JESSICA L. MATHER, Assistant Professor of Clinical Ophthalmology and Visual Sciences
B.S. (Florida State 2006); M.D. (East Tennessee State 2011) [2015]
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENNIS T. MCWEENEY</td>
<td>Associate Professor of Clinical Obstetrics and Gynecology</td>
</tr>
<tr>
<td>(B.S. (Hahnemann Medical 1997); D.O.</td>
<td>(Arizona College of Osteopathic Medicine 2003); M.Sc. (Mayo Clinic 2010)</td>
</tr>
<tr>
<td>BETH P. MEADOR</td>
<td>Assistant in Medicine</td>
</tr>
<tr>
<td>B.S.N. (Eastern Kentucky 1975); M.S.N.</td>
<td>(Vanderbilt 1977)</td>
</tr>
<tr>
<td>CLIFTON K. MEADOR</td>
<td>Professor of Medicine, Emeritus</td>
</tr>
<tr>
<td>B.A., M.D. (Vanderbilt 1952, 1955)</td>
<td></td>
</tr>
<tr>
<td>KEITH G. MEADOR</td>
<td>Professor of Psychiatry and Behavioral Sciences; Professor of Health Policy;</td>
</tr>
<tr>
<td>(B.S. (Vanderbilt 1978); M.D. (Louisville)</td>
<td>Director, Center for Biomedical Ethics and Society</td>
</tr>
<tr>
<td>(M.P.H. (Duke 1986); M.P.H. (North</td>
<td>(North Carolina 1988)</td>
</tr>
<tr>
<td>Carolina (1988))</td>
<td></td>
</tr>
<tr>
<td>M. PORTER MEADORS III</td>
<td>Assistant Clinical Professor of Medicine</td>
</tr>
<tr>
<td>B.S. (Washington and Lee 1979); M.D.</td>
<td>(Mississippi 1984)</td>
</tr>
<tr>
<td>ANNA L. MEANS</td>
<td>Research Associate Professor of Surgery; Research Associate Professor of</td>
</tr>
<tr>
<td>(B.S. (Ohio 1984); Ph.D. (Wisconsin,</td>
<td>Cell and Developmental Biology</td>
</tr>
<tr>
<td>Milwaukee 1991)</td>
<td></td>
</tr>
<tr>
<td>CLAIRE E. MEENA-LEIST</td>
<td>Assistant Clinical Professor of Pathology, Microbiology and Immunology</td>
</tr>
<tr>
<td>B.S., M.D. (Louisville 1982, 1987)</td>
<td></td>
</tr>
<tr>
<td>ANTOJE MEFFERD</td>
<td>Assistant Professor of Hearing and Speech Sciences</td>
</tr>
<tr>
<td>B.A. (Nebraska, Omaha 2004); Ph.D.</td>
<td>(Nebraska 2008)</td>
</tr>
<tr>
<td>STEPHANIE R. MEHR</td>
<td>Assistant in Anesthesiology</td>
</tr>
<tr>
<td>MITRA MEHRAD</td>
<td>Assistant Professor of Pathology, Microbiology and Immunology</td>
</tr>
<tr>
<td>M.D. (Shiraz [Iran] 2007)</td>
<td></td>
</tr>
<tr>
<td>DEEPAK MEHROTRA</td>
<td>Clinical Professor of Pediatrics</td>
</tr>
<tr>
<td>MELISSA B. MEIER</td>
<td>Assistant Clinical Professor of Oral and Maxillofacial Surgery</td>
</tr>
<tr>
<td>B.S. (Vanderbilt 2010); D.M.D. (Tufts)</td>
<td>(2015)</td>
</tr>
<tr>
<td>JENS MEILER</td>
<td>Professor of Chemistry; Associate Professor of Pharmacology; Associate</td>
</tr>
<tr>
<td>B.A. (Mississippi 1991)</td>
<td>Professor of Biomedical Informatics</td>
</tr>
<tr>
<td>HERBERT Y. MELTZER</td>
<td>Adjunct Professor of Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>B.A. (Cornell 1958); M.A. (Harvard 1959);</td>
<td></td>
</tr>
<tr>
<td>JONATHAN N. MENACHEM</td>
<td>Assistant Professor of Medicine; Assistant Professor of Pediatrics</td>
</tr>
<tr>
<td>B.S. (Duke 2000); M.D. (Tulane 2010)</td>
<td></td>
</tr>
<tr>
<td>GREGORY A. MENCIO</td>
<td>Professor of Orthopaedic Surgery and Rehabilitation</td>
</tr>
<tr>
<td>LISA A. MENDES</td>
<td>Associate Professor of Medicine</td>
</tr>
<tr>
<td>YANICE V. MENDEZ-FERNANDEZ</td>
<td>Adjunct Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>B.S. (Puerto Rico, Rico Piedras 1998);</td>
<td></td>
</tr>
<tr>
<td>CARRIE CAMPBELL MCCOY MENSER</td>
<td>Assistant Professor of Anesthesiology</td>
</tr>
<tr>
<td>B.S., M.D. (Vanderbilt 2004, 2008)</td>
<td></td>
</tr>
<tr>
<td>DAVID F. MEOLI</td>
<td>Instructor in Medicine</td>
</tr>
<tr>
<td>B.A. (Dartmouth 2000); M.S., Ph.D.</td>
<td>(Dartmouth 2006, 2011, 2011)</td>
</tr>
<tr>
<td>STEVEN G. MERANZE</td>
<td>Associate Dean for Faculty Affairs; Professor of Radiology and Radiological</td>
</tr>
<tr>
<td>Surgery; Professor of Urologic Surgery;</td>
<td>Sciences; Professor of Surgery; Vice Chair, Department of Radiology</td>
</tr>
<tr>
<td>Professor of Surgery; Vice Chair,</td>
<td>and Radiological Sciences</td>
</tr>
<tr>
<td>Department of Radiology and Radiological</td>
<td></td>
</tr>
<tr>
<td>Sciences (Philadelphia 1975); M.D.</td>
<td></td>
</tr>
<tr>
<td>SUSAN L. MERCER</td>
<td>Adjunct Assistant Professor of Pharmacology</td>
</tr>
<tr>
<td>B.S. (Seton Hill 2004); Ph.D.</td>
<td>(Maryland 2008)</td>
</tr>
<tr>
<td>RAYMOND L. Mernaugh</td>
<td>Director, MJU Graduate Program; Research Associate Professor of Biochemistry</td>
</tr>
<tr>
<td>B.S., M.S. (South Dakota State 1973, 1976);</td>
<td></td>
</tr>
<tr>
<td>WALTER H. MERRILL</td>
<td>Professor of Cardiac Surgery; Chief of Staff, Vanderbilt University Hospital</td>
</tr>
<tr>
<td>B.A. (University of the South 1970);</td>
<td></td>
</tr>
<tr>
<td>WILLIAM DAVID MERRYMAN</td>
<td>Professor of Biomedical Engineering; Professor of Medicine; Associate</td>
</tr>
<tr>
<td>Ph.D. (Pittsburgh 2007)</td>
<td>Professor of Pharmacology; Associate Chair of Biomedical Engineering</td>
</tr>
<tr>
<td>HOWARD R. MERTZ</td>
<td>Assistant Clinical Professor of Medicine</td>
</tr>
<tr>
<td>B.A. (Johns Hopkins 1982); M.D. (Baylor</td>
<td></td>
</tr>
<tr>
<td>INGRID M. MESSIOELY</td>
<td>Ingram Associate Professor of Cancer Research; Associate Professor of</td>
</tr>
<tr>
<td>B.A. (Louisiana State, Shreveport 1963);</td>
<td>Surgery</td>
</tr>
<tr>
<td>BARBARA O. MEYRICK-CLARRY</td>
<td>Assistant Clinical Professor of Dermatology</td>
</tr>
<tr>
<td>SARAH MIAN</td>
<td>Clinical Instructor in Pediatrics</td>
</tr>
<tr>
<td>B.S., M.P.H. (North Carolina 2008, 2012);</td>
<td></td>
</tr>
<tr>
<td>HEATHER A. MICHALAK</td>
<td>Assistant Clinical Professor of Pediatrics</td>
</tr>
<tr>
<td>B.A. (Wooster 1998); M.D. (Pennsylvania</td>
<td>State 2002)</td>
</tr>
<tr>
<td>GREGORY FRANCIS MICHAUD</td>
<td>Assistant Professor of Medicine</td>
</tr>
<tr>
<td>B.A. (Haverford 1983); M.D. (Maryland,</td>
<td></td>
</tr>
<tr>
<td>CHRISTINE M. MICHEEL</td>
<td>Research Assistant Professor of Medicine</td>
</tr>
<tr>
<td>A.B. (Washington University 1999);</td>
<td></td>
</tr>
<tr>
<td>ANDREW A. MICHEL</td>
<td>Assistant Professor of Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>B.A. (Baylor 1999); M.D. (Vanderbilt 2003)</td>
<td></td>
</tr>
<tr>
<td>MARC A. MICKIEWICZ</td>
<td>Assistant Clinical Professor of Emergency Medicine</td>
</tr>
<tr>
<td>B.S. (Illinois, Champaign 1995); M.D.</td>
<td>(Illinois, College of Medicine, Chicago 1999)</td>
</tr>
<tr>
<td>MARTHA K. MIERS</td>
<td>Assistant Professor of Pathology, Microbiology and Immunology</td>
</tr>
<tr>
<td>B.S. (Virginia Polytechnic Institute 1972)</td>
<td></td>
</tr>
<tr>
<td>MICHAEL I. MIGA</td>
<td>Harvie Branscomb Chair; Professor of Biomedical Engineering; Professor of</td>
</tr>
<tr>
<td>B.S. (Rhode Island 1992, 1994); Ph.D.</td>
<td>Radiological Sciences; Professor of Neurological Surgery</td>
</tr>
<tr>
<td>MEGAN E. MIGNEMI</td>
<td>Assistant Professor of Orthopaedic Surgery and Rehabilitation</td>
</tr>
<tr>
<td>B.A. (Boston College 2004); M.D. (Vanderbilt 2009)</td>
<td></td>
</tr>
<tr>
<td>MARTIN C. MIHM JR.</td>
<td>Adjunct Professor of Pathology, Microbiology and Immunology</td>
</tr>
<tr>
<td>B.S. (Pennsylvania 1980); M.S.; M.D.</td>
<td></td>
</tr>
<tr>
<td>CAROL PROOPS MILAM</td>
<td>Assistant Clinical Professor of Psychiatry and Behavioral Sciences</td>
</tr>
<tr>
<td>LISA D. MILAM</td>
<td>Associate Obstetricists and Gynecologists</td>
</tr>
<tr>
<td>B.S.N. (Bethel College, Nashville [Tennese)</td>
<td></td>
</tr>
</tbody>
</table>
DEREK PAE, Assistant Professor of Clinical Medicine
B.S. (Pennsylvania State 2009); M.D. (Virginia 2013) [2016]

LINDSAY M. PAGANO, Assistant Professor of Pediatrics
B.S. (Tulane 2005); M.D. (Medical College of Ohio 2013) [2014]

ROBERT N. PAGE, Assistant Clinical Professor of Pathology, Microbiology and Immunology
B.S. (Vanderbilt 1990); M.D. (Arkansas 1996) [2005]

ANDREA PAGE-MCCAW, Associate Professor of Cell and Developmental Biology
A.B. (Harvard 1989); Ph.D. (Massachusetts Institute of Technology 1999) [2010]

PATRICK S. PAGE-MCCAW, Research Assistant Professor of Medicine
B.A. (Haverford 1989); Ph.D. (Massachusetts Institute of Technology 1998) [2010]

RAMACHANDER K. PAIN, Associate Clinical Professor of Anesthesiology
M.B.B.S. (Kakatiya [India] 1978); M.D. (Osmania [India] 1984) [1997]

PETER PAIK, Assistant Professor of Clinical Medicine
B.S. (Yale 2001); M.A. (Conventen Theological Seminary 2008); M.D. (Pennsylvania 2009) [2014]

TUYA PAL, Associate Professor of Medicine; Associate Professor of Pediatrics
M.D. (McGill [Canada] 1992) [2017]

PRADEEP SUNNY PALLAN, Research Assistant Professor of Biochemistry

KENNETH H. PALM, Associate Professor of Emergency Medicine

THOMAS J. PALMERI, Professor of Psychology; Professor of Ophthalmology and Visual Sciences

ARVIND K. PANDEY, Instructor in Medicine
B.S., M.D. (Tulane 2006, 2010) [2016]

PRATIK P. PANDHARPANDE, Professor of Anesthesiology; Professor of Surgery
B.S. (Nagpur [India] 1993); M.S.C.I. (Vanderbilt 2005) [2001]

WILLIAM PAO, Adjunct Professor of Medicine

ARON PATEL, Assistant Clinical Professor of Otolaryngology; Assistant Professor of Biomedical Engineering

KENDRA PAPSON PAREKH, Assistant Professor of Emergency Medicine
B.S. (College of New Jersey 2001); M.D. (Pittsburgh 2005) [2008]

BIBHASKAR C. PARIA, Associate Professor of Pediatrics

JANE H. PARK, Professor of Molecular Physiology and Biophysics, Emeritus
B.S., Ph.D. (Washington University 1946, 1952) [1954]

REGINA MIYOUNG PARK, Assistant in Medicine
B.A. (Barnard 1996); M.S. (Vanderbilt 2015) [2017]

SERK IN PARK, Adjunct Associate Professor of Medicine; Adjunct Assistant Professor of Medicine
D.D.S. (Yonsei [Korea] 1999); M.S. (Korea 2001); Ph.D. (Texas, Houston 2008) [2012]

SOHEE PARK, Gertrude Conway Vanderbilt Chair; Professor of Psychology; Professor of Psychiatry and Behavioral Sciences

ALEXANDER PARKER, Research Fellow of Neurology
Ph.D. (Florida 2016) [2017]

CHRIS S. PARKER, Assistant in Medicine
B.B.A. (Harding 2001); M.B.A. (Lincoln Memorial 2003); M.S.M. (Trevessca Nazarene 2014) [2017]

SARAH SWYERS PARKER, Assistant Professor of Clinical Pediatrics
B.S. (South Carolina 2005); M.D. (South Alabama 2009) [2012]

SCOTT L. PARKER, Assistant Professor of Neurological Surgery
B.S. (Texas 2007); M.D. (Johns Hopkins 2011) [2017]

SCOTT R. PARKER, Assistant Professor of Clinical Medicine; Assistant Professor of Clinical Pediatrics
B.S. (Alabama, Huntsville 1987); M.D. (South Alabama 1991) [1999]

C. LEE PARMLEY, Professor of Anesthesiology
B.S. (Pacific Union 1973); M.D. (Loma Linda 1976); J.D. (South Texas College of Law 1989); M.Mgt. (Vanderbilt 2011) [2004]

JAMES PARNELL, Clinical Instructor in Emergency Medicine
B.S. (Lipscomb 2006); M.D. (UT Health Science Center [Tennessee] 2010) [2016]

SHARIDAN KRISTEN PARR, Research Instructor in Medicine
B.S., M.D. (Creighton 2001, 2005); M.S.C.I. (Vanderbilt 2015) [2015]

DAVID A. PARRA, Associate Professor of Pediatrics; Assistant Professor of Medicine
M.D. (Universidad Central del Ecuador 1993) [2004]

CRYSTAL G. PARRISH, Assistant in Anesthesiology
M.S.N. (Vanderbilt 2005) [2015]

LEAH MARIE PARRISH, Assistant in Anesthesiology
B.S.N. (North Carolina, Wilmington 2003); M.S.N. (Vanderbilt 2010) [2014]

C. LEON PARTAIN, Professor of Radiology and Radiological Sciences, Emeritus
B.S. (Tennessee 1963); M.S., Ph.D. (Purdue 1965, 1967); M.D. (Washington University 1975) [1980]

CYNTHIA B. PASCAL, Associate Dean; Associate Professor of Biomedical Engineering; Associate Professor of Radiology and Radiological Sciences
S.M., S.B. (Massachusetts Institute of Technology 1986, 1986); Ph.D. (Case Western Reserve 1992) [1992]

RAY L. PASCHELL, JR., Associate Professor of Clinical Anesthesiology
B.A. (Arkansas 1982); M.S. (New Orleans 1986); M.D. (Arkansas 1990) [1994]

DEVANG J. PASTAKIA, Assistant Professor of Clinical Pediatrics
B.S. (Duke 1999); M.D. (New Jersey Medical 2003) [2011]

RACHEL PASTO-CROSBY, Assistant in Pediatrics
B.S. (Rhodes College 2002); M.S.N. (Vanderbilt 2011) [2016]

BINA PATEL, Assistant Clinical Professor of Ophthalmology and Visual Sciences
M.D. (Virginia Commonwealth 2005); M.D. (Virginia 2009) [2015]

KANDARP PATEL, Assistant Professor of Psychiatry; Assistant Professor of Biomedical Engineering; Associate Professor of Psychiatry and Behavioral Sciences

MAULIK R. PATEL, Assistant Professor of Biomedical Sciences; Assistant Professor of Neurological Surgery; Assistant Professor of Hearing and Speech Sciences

NEAL R. PATEL, Professor of Clinical Pediatrics; Professor of Clinical Anesthesiology; Associate Professor of Biomedical Informatics
B.S. (California State Polytechnic 1987); M.D. (Southern California 1991); M.P.H. (Vanderbilt 2000) [1997]

SACHIN PATEL, James G. Blakemore Chair in Psychiatry; Associate Professor of Pharmacy; Associate Professor of Molecular Physiology and Biophysics
B.S. (California, Santa Barbara 1998); Ph.D., M.D. (Medical College of Wisconsin 2004, 2006) [2010]

SHRILAL PATEL, Assistant Professor of Ophthalmology and Visual Sciences
B.A. (College of New Jersey 2008); M.D. (New Jersey Medical 2010) [2014]

KRUPA PATEL-LIPPMANN, Assistant Professor of Clinical Radiology and Radiological Sciences
B.S. (Illinois, Champaign 2006); M.D. (Medical College of Wisconsin 2010) [2016]
STEWART W. PATRICK, Assistant Professor of Pediatrics; Assistant Professor of Health Policy
B.S. (Florida 2002); M.P.H. (Harvard 2007); M.D. (Florida State 2007); M.S. (Michigan 2011) [2013]

BARRON L. PATTERSON, Associate Professor of Pediatrics

SARA JANE FLETCHER PATTERSON, Clinical Professor of Pediatrics
B.S. (Calvin 1993); M.D. (Vanderbilt 1997) [2001]

CHRISTOPHER M. PATTON, Clinical Professor of Pediatrics
B.S. (New College of Florida 1990); M.D. (UT Health Science Center [Tennessee] 1994) [1998]

JAMES A. PATTON, Professor of Physics; Professor of Radiology and Radiological Sciences
B.S. (Western Kentucky 1966); Ph.D. (Vanderbilt 1972) [1973]

JAMES G. PATTON, Stevenson Chair of Biological Sciences; Professor of Cell and Developmental Biology; Professor of Ophthalmology and Visual Sciences
B.S. (University of St. Thomas [Minnesota] 1980); Ph.D. (Mayo Clinic 1988) [1993]

DAVID K. PATZER, Assistant Clinical Professor of Psychiatry and Behavioral Sciences
B.A. (Illinois Wesleyan 1984); M.D. (Northwestern 1989) [2017]

PAISIT PAUEKSAKON, Associate Professor of Pathology, Microbiology and Immunology

WILLIAM S. PAUL, Assistant Clinical Professor of Health Policy
B.S. (Stanford 1981); M.P.H. (Illinois, Chicago 1986); M.D. (Illinois, College of Medicine, Chicago 1986) [2008]

ALEXIS BARTLEY PAULSON, Associate in Radiology and Radiological Sciences
B.S.N. (Belmont 2006); M.S.N. (Pennsylvania 2007) [2016]

SIDDHARAMA PAWATE, Assistant Professor of Neurology
M.D. (Karnatak Medical [India] 1990) [2009]

ANGELE N. PAYNE, Assistant Clinical Professor of Ophthalmology and Visual Sciences
M.P.H. (Florida Agricultural and Mechanical 2004) [2018]

DEBORAH M. PAYNE, Assistant in Medicine

W. FAXON PAYNE, Professor of Radiology and Radiological Sciences, Emeritus
B.A., M.D. (Vanderbilt 1945, 1948) [1960]

ALLEN PEABODY, Assistant Clinical Professor of Pediatrics
B.A. (Tennessee 2000); M.D. (Morehouse 2007) [2012]

JOHN P. PEACh, Assistant Professor of Clinical Medicine
B.S. (Lipscomb 1990); M.D. (Louisville 1994) [1997]

MATTHEW R. PECHEY, Assistant Professor of Medicine
B.S. (Middle Tennessee State 2002); M.D. (Vanderbilt 2006) [2012]

ROBIN S. PEARLSON, Clinical Professor of Pediatrics
B.A. (Southern Methodist 1987); M.D. (UT Health Science Center [Tennessee] 1991) [1999]

ADRIAN SCOTT PEARSON, Associate Professor of Surgery
B.A. (Tennessee 1987); M.D. (UT Health Science Center [Tennessee] 1991) [1999]

TEYANA V. PEDCHENKO, Research Assistant Professor of Medicine

VADIM K. PEDCHENKO, Research Associate Professor of Medicine

R. STOKES PEEBLES, Elizabeth and John Murray Chair in Medicine; Professor of Pathology; Professor of Pathology, Microbiology and Immunology
B.S. (Davidson 1982); M.D. (Vanderbilt 1986) [1998]

JULIE T. PEEK, Clinical Professor of Pediatrics
B.S. (Yale 1984); M.D. (North Carolina 1988) [1992]

RICHARD M. PEEK, JR., Mina Cobb Wallace Chair in Immunology; Professor of Medicine; Professor of Pathology, Microbiology and Immunology; Director, Division of Gastroenterology
B.S. (Davidson 1984); M.D. (North Carolina 1988) [1995]

ALLAN B. PEETZ, Assistant Professor of Surgery
B.S. (Notre Dame 2004); M.D. (Michigan 2008) [2016]

KATIE GREENE PEGRAM, Clinical Instructor in Pediatrics
B.A. (Yale 2006); M.D. (UT Health Science Center [Tennessee] 2011) [2017]

AMANDA C. PELTIER, Associate Professor of Neurology
B.A. (Denison 1994); M.D. (Ohio State 1998); M.S. (Michigan 2005) [2005]

JULIE S. PENDERGAST, Adjunct Assistant Professor of Medicine
B.S., M.S. (Illinois, Champaign 1999, 2001); Ph.D. (Miami 2007) [2007]

JENNIFER L. PENDERGRASS, Assistant in Medicine
B.S.N. (Austin Peay State 2008); M.S.N. (Vanderbilt 2011) [2012]

DUANGENG PENG, Research Instructor in Medicine

JOHN S. PENN, Associate Dean for Faculty Affairs; Phyllis G. and William B. Snyder M.D. Endowed Chair in Ophthalmology and Visual Sciences; Professor of Ophthalmology and Visual Sciences; Professor of Medical Education and Administration (VUMC); Professor of Molecular Physiology and Biophysics; Professor of Cell and Developmental Biology
B.A. (University of the South 1978); M.S. (West Florida 1981); Ph.D. (Florida State 1984) [1998]

JACQUELYN SUE PENNINGS, Research Assistant Professor of Orthopaedic Surgery and Rehabilitation
B.S. (Belmont 2001); M.S., Ph.D. (Texas Christian 2005, 2009) [2017]

DAVID F. PENSON, Paul V. Hamilton, M.D. and Virginia E. Howd Chair in Urologic Oncology; Professor of Urologic Surgery; Professor of Medicine; Professor of Health Policy; Chair of the Department of Urologic Surgery; Director, Center for Surgical Quality and Outcomes Research
B.A. (Pennsylvania 1987); M.D. (Boston University 1991); M.P.H. (Yale 2001); M.Mgt. (Vanderbilt 2014) [2009]

GALEN PERDikIS, Professor of Plastic Surgery; Chair, Department of Plastic Surgery
M.B.B.Ch. (Witwatersrand [South Africa] 1988) [2017]

EDWARD C. PERDUE, Assistant Clinical Professor of OraL and Maxillofacial Surgery

JASON K. PEREIRA, Assistant Professor of Clinical Medicine
B.S. (Tennessee 1997); M.D. (UT Health Science Center [Tennessee] 2001) [2004]

MATTHEW L. PERKINS, Clinical Professor of Pediatrics
B.S. (Western Kentucky 1990); M.D. (Louisville 1994) [1999]

JONATHAN B. PERLIN, Clinical Professor of Medicine
B.A. (Virginia 1984); Ph.D., M.D. (Virginia Commonwealth 1991, 1992) [2007]

AIMEE P. PERRI, Assistant Professor of Clinical Pediatrics
B.S. (Texas 1994); M.D. (Texas, San Antonio 1999) [2011]

ROMAN E. PERRI, Assistant Professor of Medicine
B.S., M.D. (Wisconsin 1995, 1999) [2006]

DANIEL S. PERRIEN, Assistant Professor of Medicine
B.A. (Hendrix 1998); Ph.D. (Arkansas, Little Rock 2006) [2009]

SAMUEL J. PERRY, Instructor in Clinical Medicine; Instructor in Clinical Pediatrics
B.S., M.D. (Wake Forest 1979, 1988) [2017]

ANNA K. PERSION, Associate Professor of Medicine
B.A. (Macalester 2000); M.D. (Washington University 2005) [2010]

SARIKA UPPAL PETERS, Assistant Professor of Pediatrics; Assistant Professor of Psychiatry and Behavioral Sciences
B.A. (Austin College 1993); M.A., Ph.D. (Texas 1997, 2000) [2009]

TODD ERIK PETERS, Associate Professor of Clinical Psychiatry and Behavioral Sciences
B.A. (McDaniel 2002); M.D. (Pennsylvania State 2006) [2011]

JOSH F. PETERSON, Associate Professor of Biomedical Informatics; Associate Professor of Medicine
B.S. (Stanford 1992); M.D. (Vanderbilt 1997); M.P.H. (Harvard 2002) [2013]
NEERAJA B. PETERSON, Associate Professor of Medicine
B.S. (Duke 1993); M.D. (Vanderbilt 1997); M.Sc. (Boston University 2002) [2002]

TODD E. PETERSON, Associate Professor of Radiology and Radiological Sciences; Associate Professor of Physics

MICHAEL R. PETRACEK, Cornelius Vanderbilt Chair in Surgery; Professor of Cardiac Surgery
B.S. (Baylor 1967); M.D. (Johns Hopkins 1971) [2006]

KIMBERLY A. PETRIE, Assistant Professor of Medical Education and Administration (VU)
B.A. (Lawrence 1996); Ph.D. (Vanderbilt 2004) [2008]

WILLIAM M. PETRIE, Professor of Clinical Psychiatry and Behavioral Sciences; Professor of Clinical Neurology; Director of Geriatric Psychiatry Outpatient Program
B.A.; M.D. (Vanderbilt 1968, 1972) [2011]

CATHLEEN C. PETTEPHER, Assistant Dean for Assessment, School of Medicine; Professor of Biochemistry; Professor of Medical Education and Administration (VU)

APRIL C. PETTIT, Assistant Professor of Medicine
B.S. (Michigan 2000); M.D. (Wayne State 2004); M.P.H. (Vanderbilt 2010) [2011]

ANDREW N. PFEIFFER, Assistant Professor of Emergency Medicine
A.B. (Brown 2005); M.D. (Virginia 2010) [2013]

JEAN P. PFOTENHAUER, Associate in Pediatrics
B.A. (Reed 1976); M.S. (California, Irvine 1983) [1989]

HUONG T. PHAM, Assistant Professor of Neurology
B.A. (Case Western Reserve 2006); M.D. (Marshall 2011) [2016]

WELLINGTON PHAM, Associate Professor of Radiology and Radiological Sciences; Associate Professor of Biomedical Engineering
B.S., Ph.D. (Toledo 1996, 2000) [2006]

JASON PHAN, Research Assistant Professor of Biochemistry
B.S. (California, Irvine 1995); Ph.D. (South Carolina 2001) [2009]

JOEL M. PHARES, Assistant Professor of Clinical Medicine
B.S. (West Virginia 1992); M.D. (Robert Wood Johnson Medical, New Brunswick 1997) [2012]

AMANDA R. PHILIPS, Assistant in Medicine
B.S.N. (Belmont 2005); M.H.S. (South College 2010) [2017]

FENNA T. PHIBBS, Associate Professor of Neurology
B.S. (Colorado State 1996); M.D. (Colorado 2002); M.P.H. (Vanderbilt 2010) [2011]

MARY PHILIP, Assistant Professor of Medicine; Assistant Professor of Pathology, Microbiology and Immunology
B.S. (Yale 1994); Ph.D., M.D. (Chicago 2002, 2004) [2017]

ELIZABETH J. PHILLIPS, John A. Oates Chair in Clinical Research; Professor of Pathology, Microbiology and Immunology; Professor of Pharmacology; Professor of Medicine

HEATHER N. PHILLIPS, Clinical Professor of Pediatrics
B.S. (Birmingham-Southern 1999); M.D. (Alabama, Birmingham 2003) [2008]

IRA E. PHILLIPS III, Assistant Professor of Psychiatry and Behavioral Sciences
S.B. (Massachusetts Institute of Technology 2003); A.M. (Harvard 2006); M.D. (Vanderbilt 2010) [2014]

JAMES DAVID PHILLIPS, Assistant Professor of Otolaryngology
B.S., M.D. (Vanderbilt 2005, 2009) [2016]

JOHN A. PHILLIPS III, David T. Karzon Chair in Pediatrics; Professor of Pediatrics; Professor of Pathology, Microbiology and Immunology; Professor of Medicine; Director, Division of Medical Genetics; Adjunct Professor of Pediatrics at Meharry Medical College
M.D. (Wake Forest 1969); MD,PNP [1984]

KRISTINE PHILLIPS, Associate Professor of Medicine
B.S., Ph.D. (Louisiana State 1988, 1993); M.D. (Johns Hopkins 1995); M.S. (Michigan 2016) [2016]

MARY S. PHILLIPS, Assistant in Psychiatry and Behavioral Sciences
B.S.N. (North Carolina 1984); M.S.N. (Vanderbilt 2008) [2010]

SHARON E. PHILLIPS, Assistant in Bioinformatics
B.S., M.S.P.H. (South Florida 1987, 1998) [2011]

RACHEL VICTORIA PHILLIPS, Clinical Instructor in Pediatrics
B.S. (Alabama 2010); M.D. (Mississippi 2014) [2017]

ROBERT N. PIANA, Professor of Medicine
A.B. (Harvard 1980); M.D. (Mississippi 1987) [2000]

MARIA BLANCA PIAZUELO, Research Associate Professor of Medicine
M.D. (Universidad del Valle [Colombia] 1986) [2005]

JAMES W. PICHERT, Professor of Medical Education and Administration (VU)
B.S. (Bucknell 1974); M.S., Ph.D. (Illinois, Champaign 1976, 1978) [1979]

LAURA PICKEL, Assistant in Pediatric Surgery
B.S. (Tennessee, Memphis 2010); M.S. (Trevecca Nazarene 2013) [2014]

DAVID R. PICKENS III, Associate Professor of Radiology and Radiological Sciences

REBECCA LYNN PICKENS, Assistant in Surgery
B.S.N. (Belmont 2013); M.S.N. (Vanderbilt 2017) [2017]

ERIN M. PICOU, Research Assistant Professor of Hearing and Speech Sciences
B.S. (Middle Tennessee State 2003); Au.D., Ph.D. (Vanderbilt 2007, 2011) [2011]

HOLLY R. PIERCE, Assistant in Medicine
B.S.N. (Tennessee 1997); M.S.N. (Vanderbilt 2007) [2008]

RICHARD A. PIERCE, Assistant Professor of Surgery

ASHLEE S. PIERCEY, Assistant in Medicine
B.S. (Lipscomb 2000); M.S.N. (Vanderbilt 2003) [2015]

LISA M. PIERCEY, Assistant Clinical Professor of Pediatrics
B.S. (Lipscomb 1998); M.D. (East Tennessee State 2002); M.B.A. (Bethel College, McKenzie [Tennessee] 2009) [2007]

MONICA PIERSON, Assistant Professor of Clinical Pediatrics
B.S.N. (Andrews 1976); M.D. (Univ of Juarez 1984) [2014]

JENNIFER A. PIETENPOL, Benjamin F. Byrd Jr. Chair in Oncology; Professor of Biochemistry; Professor of Otolaryngology; Director of the Vanderbilt-Ingram Cancer Center
B.A. (Carleton College 1986); Ph.D. (Vanderbilt 1990) [1994]

JOHN B. PIETRICH, Professor of Pediatrics; Professor of Pediatric Surgery
B.S. (Georgetown 1968); M.D. (Michigan 1972) [1986]

JENNIFER HERBERT PILKINGTON, Assistant Professor of Clinical Hearing and Speech Sciences
B.S. (Tennessee 1984); M.S. (Vanderbilt 1987) [2004]

MARK A. PILKINTON, Instructor in Medicine
B.S. (Memphis 2000); Ph.D., M.D. (Illinois, College of Medicine, Chicago 2009, 2009) [2016]

MICHAEL A. PILLA, Professor of Clinical Anesthesiology

AUREA F. PIMENTA, Research Assistant Professor of Neurology; Research Assistant Professor of Pharmacology

BRAM I. PINKLEY, Associate Clinical Professor of Pediatrics
B.S. (Vanderbilt 1994); M.D. (East Tennessee State 2001) [2006]

J. RAYMOND PINKSTON, Assistant Clinical Professor of Emergency Medicine
B.S. (Vanderbilt 1986); M.D. (UT Health Science Center [Tennessee] 1991) [1997]

C. WRIGHT PINSON, Senior Associate Dean for Clinical Affairs; Professor of Surgery; Professor of Management; Deputy CEO and Chief Health System Officer, VUMC; Adjunct Professor of Nursing

COURTNIE L. PIRKLE, Assistant in Otolaryngology
B.S.N. (Central Florida 2011); M.S.N. (Alabama, Birmingham 2017) [2017]

ADAM S. PITTS, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.S.; D.D.S. (Oklahoma 2000, 2004); M.D. (Vanderbilt 2007) [2010]
RONALD E. PRUITT, Assistant Clinical Professor of Medicine
RACHAEL LYNN PRUSHA, Assistant in Surgery
B.S. (Iowa State, Science and Technology 2012); M.S. (Vanderbilt 2015) [2016]
VINCENT WILLIAM PRUSICK, Instructor in Clinical Orthopaedic Surgery and Rehabilitation
B.S. (Michigan 2007); M.D. (Wayne State 2012) [2017]
SUMIT PRUTHI, Associate Professor of Radiology and Radiological Sciences; Associate Professor of Pediatrics
M.D. (Mumbai [India] 1996) [2010]
REBECCA C. PRYJMÅK, Assistant in Pediatrics
B.S.N. (Samford 2006); M.S.N. (Vanderbilt 2012) [2013]
HEATHER H. PUIA, Assistant Professor of Pathology, Microbiology and Immunology
MEREDITH EVANS PUGH, Assistant Professor of Medicine
B.S. (Richmond 2000); M.D. (Virginia Commonwealth 2004); M.S.C.I. (Vanderbilt 2012) [2012]
JILL M. PULLEY, Director, Research Support Services; Research Associate Professor of Medicine
B.S. (Yale 1991); M.B.A. (Pennsylvania 1996) [2007]
CARY WATSON PULLIAM, Assistant Clinical Professor of Surgery
B.A., M.D. (Vanderbilt 1975, 1979) [2016]
MITCHELL A. PULLIAS, Associate Clinical Professor of Pediatrics
B.A. (Ljubljana 1994); M.D. (UT Health Science Center [Tennessee] 1999) [2003]
PRIYA PURI, Assistant Clinical Professor of Oral and Maxillofacial Surgery
MICHELLE G. PUZDRAXIEKICS, Clinical Instructor in Pediatrics
M.P.H. (Tulane 1997); B.S. (California State, Sacramento 1997); M.D. (Tulane 2000) [2015]
AI-DONG QI, Research Assistant Professor of Pediatrics
M.D. (Birzhou Medical College [China] 1985); M.S. (Shandong Medical [China] 1990); Ph.D. (Chinese University of Hong Kong 1997) [2012]
JUN QIAN, Research Assistant Professor of Medicine
B.S., M.S. (Hunan Medical [China] 1994, 1999); Ph.D. (Xiangya School of Medicine [China] 2002) [2012]
HUAN QIAO, Research Instructor in Medicine
JINGBO QIAO, Research Assistant Professor of Pediatric Surgery
SHIMIAN QU, Research Associate Professor of Neurology
B.A. (Beijing Agricultural [China] 1984); M.S. (Chinese Academy of Sciences 1987); Ph.D. (Vanderbilt 1993) [2013]
XUANGUO QU, Research Associate Professor of Pediatrics
B.S., M.S. (Huazhong Normal [China] 1984, 1987); Ph.D. (Huazhong University of Science and Technology [China] 1999) [2006]
VITO QUARANTA, Professor of Biochemistry; Professor of Pharmacology
M.D. (Bari [Italy] 1974) [2003]
SUSANNA LEIGH QUASEM, Assistant Clinical Professor of Psychiatry and Behavioral Sciences
B.A. (Southern Adventist 1998); M.D. (UT Health Science Center [Tennessee] 2003) [2008]
QUINCY A. QUICK, Adjunct Assistant Professor of Radiation Oncology
B.S. (Furman 1994); M.S. (Virginia State 1996); Ph.D. (New Mexico State 2002) [2018]
VIRGINIA DEBLANC QUINN, Assistant in Medicine
B.A., M.S.N. (Vanderbilt 2015, 2017) [2017]
BARRETT J. RABURN, Assistant in Neurological Surgery
B.S., M.S.N. (Trevcca Nazarene 2012, 2014) [2015]
RYAN T. RABURN, Assistant in Neurological Surgery
B.S. (King 2005); M.S.M. (Trevcca Nazarene 2007) [2010]
ANDREW E. RADBILL, Assistant Professor of Pediatrics
B.S. (Vanderbilt 1998); M.D. (Alabama, Birmingham 2003) [2010]
RAFAEL RADI, Adjunct Professor of Biochemistry
LISA RAE, Assistant Professor of Surgery
B.S. (Maryland 1996); M.B.S., M.D. (New Jersey Medical 2001, 2006) [2013]
STEPHEN P. RAFFANTI, Professor of Medicine
B.A. (California, Berkeley 1975); M.D. (Genova [Italy] 1985); M.P.H. (Vanderbilt 2003) [1990]
AMANDA NELSON RAGLE, Assistant Professor of Clinical Radiology and Radiological Sciences
B.S. (Western Kentucky 2000); M.D. (Kentucky, Lexington 2004) [2010]
JENNIFER M. RAGSDALE, Associate Clinical Professor of Pediatrics
B.S. (Notre Dame 1992); M.D. (UT Health Science Center [Tennessee] 1997) [2000]
S. M. JAMSHEDUR RAHMAN, Research Assistant Professor of Medicine
MEGAN RAHMLOW, Assistant Professor of Clinical Neurology
B.A., M.D. (Missouri, Kansas City 2006, 2006) [2017]
DAVID S. RAIFORD, Senior Associate Dean for Faculty Affairs; Professor of Medical Education and Administration; Professor of Medicine; Chief of Clinical Staff, VUMC
B.S. (Massachusetts Institute of Technology 1981); M.D. (Johns Hopkins 1985) [1991]
SATISH R. RAJ, Adjunct Associate Professor of Medicine
B.Sc. (Rensselaer Polytechnic Institute 1991); M.D. (Queen’s [Canada] 1996); M.S.C.I. (Vanderbilt 2004) [2002]
SEESANDRA V. RAJAGOPALA, Research Assistant Professor of Medicine
M.Sc. (Banglore [India] 1998); Ph.D. (Heidelberg [Germany] 2006) [2017]
RAMNARAYAN RAMACHANDRAN, Assistant Professor of Hearing and Speech Sciences; Assistant Professor of Psychology
M.Sc. (Birla Institute of Technology [India] 1991); M.S. (Virginia Commonwealth 1993); Ph.D. (Johns Hopkins 2000) [2012]
DAYANIDHI RAMAN, Adjunct Assistant Professor of Pharmacology
D.V.M. (Madras [India] 1988); Ph.D. (Kansas State 1996) [2003]
SAUMYA RAMANATHAN, Adjunct Assistant Professor of Pharmacology
B.S., M.S. (Madras [India] 2002, 2004); Ph.D. (Arizona 2012) [2017]
NAGENDRA RAMANNA, Assistant Professor of Medicine
M.B.B.S. (Armed Forces Medical College [India] 1980); M.D. (Postgraduate Institute of Medical Education and Research [India] 1984) [2012]
RANGARAJ RAMANUJAM, Richard M. and Betty Ruth Miller Chair in Healthcare Management; Professor of Management; Professor of Health Policy
ANDREA HAVENS RAMirez, Adjunct Assistant Professor of Medicine
B.S. (North Carolina State 2002); M.D. (Duke 2007); M.S. (Vanderbilt 2011) [2009]
MARIA E. RAMirez, Assistant in Medicine
B.S. (Pace, White Plains 1994); M.S.N. (Vanderbilt 2016) [2017]
Haley Elizabeth Ramsey, Research Assistant Professor of Medicine
B.Sc. (Tennessee 2002); M.Sc. (Bonn [Germany] 2007); Ph.D. (Vienna [Austria] 2012) [2015]
Lloyd H. Ramsey, Professor of Medicine, Emeritus
B.S. (Kentucky, Lexington 1942); M.D. (Washington University 1950) [1953]
Elizabeth Vance Randolph, Clinical Instructor in Pediatrics
Timothy J. Ranval, Assistant Clinical Professor of Surgery
B.S. (Michigan State 1974); M.S., M.D. (Louisville 1980, 1983) [1993]
Vidya N. Rao, Assistant Clinical Professor of Anesthesiology
M.D. (Bombay [India] 1988) [2001]
Faiza Rashid, Assistant in Medicine
Judith A. Rassi, Associate Professor of Hearing and Speech Sciences, Emerita
B.S. (Illinois State 1961); M.A. (Northwestern 1963) [1990]
JEFFREY C. RATHMELL, Cornelius Vanderbilt Chair in Immunobiology; Professor of Pathology, Microbiology and Immunology; Professor of Molecular Physiology and Biophysics
B.S. (Northern Iowa 1991); Ph.D. (Stanford 1997) [2015]

W. KIMRYN RATHMELL, Cornelius Abernathy Craig Chair; Professor of Medicine; Professor of Biochemistry

CAROL ANN RAUCH, Associate Professor of Pathology, Microbiology and Immunology

LINDSAY M. RAUTH, Clinical Professor of Pediatrics
B.A. (Virginia 1998); M.D. (Vanderbilt 2002) [2005]

MARK E. RAWLS, Assistant Professor of Clinical Pediatrics
B.E. (Vanderbilt 2002); M.D. (Mississippi 2006) [2010]

WAYNE A. RAY, Professor of Health Policy

JOSEPH MICHAEL REARDON, Instructor in Emergency Medicine
B.S. (Duke 2009); M.D. (Harvard Medical 2013) [2016]

PETER FRANCIS REBEIRO, Assistant Professor of Medicine

ERIN C. REBELE, Assistant Clinical Professor of Obstetrics and Gynecology
B.S. (Lehigh 2002); M.D. (New Jersey Medical 2006) [2010]

ANVESH REDDY, Assistant Professor of Ophthalmology and Visual Sciences
B.A. (Washington University 2005); M.D. (UT Health Science Center [Tennessee] 2011) [2015]

AVANJA REDDY, Assistant Clinical Professor of Oral and Maxillofacial Surgery

CHAKRADHAR MADHAVAREDDIGARI REDDY, Adjunct Assistant Professor of Medicine
B.Sc., M.S. (Navodaya Cooperative Junior College [India] 1991); M.D. (Kurnool Medical College [India] 1999) [2015]

CHURKU M. REDDY, Clinical Professor of Pediatrics

NISHTHA M. REDDY, Associate Professor of Medicine
M.B.B.S. (Ambedkar Medical [India] 1998); M.S.C.I. (Vanderbilt 2010) [2007]

SHILPA S. REDDY, Assistant Professor of Pediatrics
B.S. (Michigan 2006); M.D. (Iowa 2010) [2015]

SRIJAYA KARMA REDDY, Associate Professor of Anesthesiology
B.A. (Emory 2001); M.D. (Medical University of the Americas 2005); M.B.A. (George Washington 2013) [2018]

SUJANA K. REDDY, Instructor in Clinical Medicine
B.A. (Northwestern 1999); M.D. (UT Health Science Center [Tennessee] 2003) [2014]

JAMES ANDREW REED, Assistant Clinical Professor of Oral and Maxillofacial Surgery
D.D.S. (Tennessee, Memphis 2008); M.S.D. (Virginia Commonwealth 2011) [2016]

PETER W. REED, Associate Professor of Pharmacology, Emeritus
B.A. (Syracuse 1961); Ph.D. (SUNY, Upstate Medical Center 1968) [1973]

JOHN JEFFREY REESE, Mildred Thornton Stahlman Chair in Perinatology; Professor of Pediatrics; Professor of Cell and Developmental Biology; Associate Professor of Biomedical Engineering
B.A., M.D. (Kansas 1982, 1982) [2002]

NIKI REESE, Assistant in Neurological Surgery
B.S. (Florida International ) [2016]

JENNIFER L. REEVES, Assistant in Anesthesiology
B.S. (Tennessee 2001); M.S.N. (Vanderbilt 2017) [2017]

RUTH REEVES, Assistant Professor of Biomedical Informatics
B.A. (CUNY, Queens College 1988); M.S., Ph.D. (CUNY 1994, 2004) [2015]
REBECCA M. SAPPPINGTON-CALKINS, Associate Professor of Ophthalmology and Visual Sciences; Associate Professor of Pharmacology
B.S. (Washington College 2000); M.S., Ph.D. (Rochester 2003, 2004) [2009]

SARIKA SARASWATI, Research Assistant Professor of Pathology, Microbiology and Immunology
B.S., M.S. (Alahabad [India] 1993, 1995); Ph.D. (Arkansas 2008) [2016]

MOHANAKRISHNAN M. SATHYAMOORTHY, Assistant Clinical Professor of Medicine
B.S., M.S.E. (Johns Hopkins 1993, 1998); M.D. (SUNY, Stony Brook 2001) [2007]

SANDEEP ANANTHA SATHYANARAYANA, Adjunct Assistant Professor of Surgery

GOWRI SATYANARAYANA, Adjunct Assistant Professor of Medicine
B.S. (Wright State 2001); M.D. (Ohio State 2007) [2013]

CHRISTINE SAUNDERS, Adjunct Associate Professor of Pharmacology
B.A. (Franklin and Marshall 1988); Ph.D. (Philadelphia College of Pharmacy 1994) [2002]

SUSAN R. SAUNDERS, Associate in Obstetrics and Gynecology
M.S.N. (Vanderbilt 1998); D.N.P. (Arkansas, Little Rock 2016) [2016]

BIPIN N. SAVANI, Professor of Medicine

BRENT VERNON SAVOIE, Assistant Professor of Clinical Radiology and Radiological Sciences
J.D. (Virginia ); B.A., M.D. (Vanderbilt 2001, 2009) [2013]

CORLISS VOGT SAVOIE, Assistant Professor of Clinical Psychiatry and Behavioral Sciences
B.A. (Dartmouth 1999); M.D. (Vanderbilt 2004) [2016]


ABHINAV SAXENA, Assistant Clinical Professor of Psychiatry and Behavioral Sciences
B.S. (Georgia 2007); M.D. (Mercer 2011) [2015]

MELISSA L. YESKA SCALISE, Assistant Professor of Clinical Medicine
B.S. (Wayne State 2001); M.D. (Nebraska 2006) [2010]

ANDREW E. SCANGA, Assistant Professor of Medicine

KRISTEN R. SCARPATO, Assistant Professor of Urologic Surgery
B.A. (Colorado 2000); M.P.H. (Boston University 2003); M.D. (Tufts 2009) [2014]

ANDREW R. SCHAALE, Assistant in Neurology
B.S. (Bryan 2011); M.S.M. (Trevecca Nazarene 2013) [2017]

ABIGAIL E. SCHACHTER, Clinical Instructor in Pediatrics
B.A. Indiana, Bloomington 2007); M.D. (Saint Louis University 2011) [2017]

ADAM TROY SCHAFAER, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.S. (Miami [Ohio] 1996); D.M.D. (Pittsburgh 2004); M.D. (Vanderbilt 2007) [2010]

JOSEPH J. SCHLESINGER, Assistant Professor of Biomedical Sciences
B.S. (Columbia 1997); Ph.D., M.D. (New York 2009, 2009) [2015]

JONATHAN S. SCHILDCROUT, Professor of Biostatistics; Professor of Anesthesiology
B.S. (Indiana, Bloomington 1994); M.S. (North Carolina 1996); Ph.D. (University of Washington 2004) [2004]

JULIA SCHLECHTER, Clinical Instructor in Obstetrics and Gynecology

KELLY H. SCHLENDORF, Assistant Professor of Medicine
B.S., B.A. (Duke 1999, 1999); M.D. (Emory 2005); M.H.S. (Johns Hopkins 2011) [2012]

JOSSEPH J. SCHLESINGER, Assistant Professor of Biomedical Engineering; Assistant Professor of Hearing and Speech Sciences; Assistant Professor of Anesthesiology; Adjunct Assistant Professor of Nursing
B.A. (Loyola, New Orleans 2004); M.D. (Texas 2008) [2013]

JONATHAN E. SCHMITZ, Assistant Professor of Pathology, Microbiology and Immunology
A.B. (Princeton 2002); M.Phil. (Cambridge [U.K.] 2004); Ph.D. (Rockefeller 2011); M.D. (Cornell 2012) [2014]

NATHALIE C. SCHNETZ-BOUTAUD, Research Instructor in Pharmacology
B.S., M.S. (Purdue 1989) [2008]

BOB SCHEIDT, Associate Professor of Radiological Sciences
B.S. (North Dakota 2006); Ph.D., M.D. (Loma Linda 2011, 2011) [2016]

RACHEL L. SCHREIER, Assistant in Medicine
B.S. (Tennessee, Martin 1996); M.S.N. (Vanderbilt 2007) [2011]

C. MELANIE SCHUELE, Associate Professor of Hearing and Speech Sciences
B.S.Ed. (Miami [Ohio] 1981); M.A. (Texas 1985); Ph.D. (Kansas 1995) [2002]
SHAZMA ALI SHABAN, Assistant in Surgery
B.S.N. (Belmont 2010); M.S.N. (Vanderbilt 2012) [2014]
R. BRUCE SHACK, Adjunct Professor of Plastic Surgery
M.D. (Texas, Galveston 1969); M.D.,ACNP [2002]
CLAUDE EDWARD SHACKELFORD, Assistant Professor of Clinical Medicine; Assistant Professor of Clinical Pediatrics
B.A. (Harvard 1995); M.D. (Alabama, Birmingham 2000) [2008]
LAURIE SHACKLEFORD, Assistant in Medicine
B.S. (Alabama 1989); M.S.N., D.N.P. (Vanderbilt 1993, 2013) [2014]
REBECCA SHAFER, Assistant in Pediatrics
B.S. (Mary Washington 2006); M.Ed. (Vanderbilt 2008) [2016]
DAVID SHAFFER, Professor of Surgery
B.A. (Yale 1978); M.D. (Columbia 1982) [2001]
ASHISH SHAH, Professor of Cardiac Surgery; Professor of Biomedical Engineering; Chair of the Department of Cardiac Surgery
B.S.E. (Duke 1991); M.D. (Pittsburgh 1995) [2015]
CHRIRAYU SHAH, Assistant Professor of Clinical Radiology and Radiological Sciences
B.S. (Lipscomb 1998); M.D. (Meharry Medical 2004) [2012]
HAMID M. SHAH, Assistant Professor of Neurological Surgery; Assistant Professor of Anesthesiology
B.S. (Wichita State 1998); M.D. (Kansas 2005) [2016]
KARAN SAMIR SHAH, Instructor in Emergency Medicine
B.S. (Bucknell 2010); M.D. (Wake Forest 2014) [2017]
MALEE V. SHAH, Assistant Professor of Clinical Pediatrics
M.D. (Medical University of Silesia [Poland] 2001) [2009]
SHAILJA C. SHAH, Instructor in Medicine
B.S., M.D. (Drexel 2007, 2011) [2017]
CHEVIS N. SHANNON, Research Associate Professor of Neurological Surgery; Research Associate Professor of Pediatrics
B.S. (Alabama, Birmingham 1993); M.B.A. (Florida State 1998); M.P.H., Dr.P.H. (Alabama, Birmingham 2002, 2009) [2013]
ANGELIQUE M. SHAPMAN, Assistant in Medicine
B.S. (Austin Peay State 2005); M.S.N. (Saint Louis 2008) [2011]
STEVEN S. SHARFSTEIN, Adjunct Professor of Psychiatry and Behavioral Sciences
B.A. (Dartmouth 1964); M.D. (Yeshiva 1969); M.P.A. (Harvard 1973) [2008]
MANISHA SHARMA, Research Instructor in Cell and Developmental Biology
B.S. (Delhi [India] 1996); B.A.S., Ph.D. (University of New South Wales 1997, 2002) [2015]
KENNETH W. SHARP, Professor of Surgery
B.S. (Florida 1973); M.D. (Johns Hopkins 1977) [1984]
UMA SHASTRI, Assistant Professor of Anesthesiology
B.Sc. (Windsor [Canada] 2001); M.D. (McMaster [Canada] 2005) [2015]
AARON C. SHAYER, Assistant Professor of Pathology, Microbiology and Immunology
B.S. (Rice 1997); Ph.D. (Pennsylvania 2003); M.D. (Chicago 2007) [2012]
CIARA MARTIN SHAYER, Assistant Professor of Medicine
B.A. (Rice 1999); Ph.D., M.D. (Northwestern 2005, 2007) [2015]
ANDREW SHAW, Professor of Anesthesiology
ROMAN V. SHCHEPIN, Research Assistant Professor of Radiology and Radiological Sciences
B.S. (Perm State [Russia] 2000); Ph.D. (Nebraska 2006) [2007]
JOHN K. SHIA, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.S. (Bradley 1982); D.M.D. (Southern Illinois 1986) [2009]
JONATHAN H. SHEEHAN, Research Associate Professor of Biochemistry
MARLON SHELL, Assistant Clinical Professor of Pediatrics
JAMES R. SHELLER, Professor of Medicine
ELAINE L. SHELTON, Assistant Professor of Pediatrics; Assistant Professor of Pharmacology
B.A. (Miami [Ohio] 2002); Ph.D. (Cincinnati 2008) [2013]
JIN-HUI SHEN, Research Assistant Professor of Ophthalmology and Visual Sciences
SHARON T. SHEN, Assistant Professor of Medicine
B.S. (Massachusetts Institute of Technology 1999); M.D. (Northwestern 2003) [2013]
JAYANT P. SHENAI, Professor of Pediatrics, Emeritus
M.B.B.S. (Seth G.S. Medical [India] 1969); D.C.H. (College of Physicians and Surgeons, Mumbai [India] 1971); M.D. (Seth G.S. Medical [India] 1972) [1978]
QUAN-HU SHENG, Research Assistant Professor of Biostatistics
B.S. (Nanjing Univ. 1995); M.S., Ph.D. (Chinese Academy of Sciences 2003, 2008) [2014]
BRYAN E. SHEPHERD, Professor of Biostatistics
B.S. (Brigham Young 1999); M.S., Ph.D. (University of Washington 2001, 2005) [2005]
KIMBEL D. SHEPHERD, Clinical Professor of Pediatrics
B.A. (Mississippi State 1992); M.D. (Mississippi, Jackson 1996) [2004]
MARTHA ELLEN SHEPHERD, Assistant Professor of Clinical Pediatrics; Assistant Professor of Clinical Medicine
B.S. (Tennessee, Martin 1997); D.O. (Kansas City 2001) [2008]
STEPHEN SCOTT SHEPHERD, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.S. (Mississippi State 1978); D.M.D. (Alabama, Birmingham 1982) [2018]
DEBORAH D. SHERMAN, Assistant Clinical Professor of Ophthalmology and Visual Sciences
B.S. (Baylor 1982); M.D. (East Tennessee State 1986) [1991]
KRISTEN SHERMAN, Assistant in Neurology
B.S. (Lipscomb 2008); M.S. (B. [2012] [2015]
MICHAEL H. SHERMAN, Assistant Professor of Clinical Psychiatry and Behavioral Sciences
B.S. (Colorado State 1972); M.D. (Colorado 1976) [1990]
EDWARD R. SHERWOOD, Cornelius Vanderbilt Chair in Anesthesiology; Professor of Anesthesiology; Professor of Pathology, Microbiology and Immunology
B.S. (Southwestern [Texas] 1981); Ph.D. (Tulane 1986); M.D. (Chicago 1994) [2012]
CHANJUAN SHI, Associate Professor of Pathology, Microbiology and Immunology
CYNDY A SHIBAO, Associate Professor of Medicine
BIH-HWA SHIEH, Associate Professor of Pharmacology
B.S., M.S. (National Taiwan 1979, 1981); Ph.D. (Stony Brook 1986) [1991]
CHRISTINE SHIEH, Assistant Professor of Ophthalmology and Visual Sciences
B.S., M.S. (Maryland, Baltimore 2005, 2006); M.D. (Duke 2010) [2016]
ALLISON BAKER SHIELDS, Assistant in Pediatrics
B.S., M.S.N. (Vanderbilt 2014, 2015) [2016]
ANGELA D. SHIELDS, Assistant Clinical Professor of Psychiatry
B.S. (Cornell 2003); Ph.D. (Vanderbilt 2009, 2011) [2015]
VALERIE A. SHIELDS, Assistant in Medicine
B.S. (Northeastern 2014); M.P.A.S. (Tufts 2017) [2017]
MYRICK CLEMENTS SHILLARD, Jr., Assistant Professor of Surgery; Assistant Professor of Medicine
ANDREW ALAN SHINAR, Associate Professor of Orthopaedic Surgery and Rehabilitation
B.A. (Stanford 1984); M.D. (Columbia 1988) [2001]
ERIC TATSUO SHINOHARA, Associate Professor of Radiation Oncology
B.S. (Maryland 1999); M.D., M.S.C.I. (Vanderbilt 2003, 2005) [2010]
CHIYO SHIOTA, Research Instructor in Molecular Physiology and Biophysics

MASAKAZU SHIOTA, Associate Professor of Molecular Physiology and Biophysics

ASHLEY H. SHOEMAKER, Assistant Professor of Pediatrics
B.S. (William and Mary 2002); M.D. (Virginia Commonwealth 2006); M.S.C.I. (Vanderbilt 2012) [2010]

M. BENJAMIN SHOEMAKER, Assistant Professor of Medicine
B.S. (William and Mary 2002); M.D. (Virginia 2006); M.S.C.I. (Vanderbilt 2013) [2014]

BRIAN C. SHONESY, Research Assistant Professor of Molecular Physiology and Biophysics
B.S., Ph.D. (Auburn 2002, 2009) [2015]

MARTHA J. SHROPJOE, Research Associate Professor of Medicine
B.S. (East Tennessee State 2004, 2006); Ph.D. (Medical University of South Carolina 2010) [2011]

EDWARD K. SHULTZ, Associate Professor of Biomedical Informatics, Emeritus
A.A. (Montgomery College, Rockville [Maryland] 1972); B.S. (Oregon 1979); M.D. (Yale 1979); M.S. (Minnesota, Duluth 1984) [1997]

XIAO OU SHU, Ingram Professor of Cancer Research; Professor of Medicine

HARRISON J. SHULL, Jr., Associate Clinical Professor of Medicine
B.S. (Vanderbilt 1966); M.D. (UT Health Science Center [Tennessee] 1970) [1977]

EDWARD K. SHULTZ, Associate Professor of Biomedical Informatics, Emeritus
A.A. (Montgomery College, Rockville [Maryland] 1972); B.S. (Oregon 1979); M.D. (Yale 1979); M.S. (Minnesota, Duluth 1984) [1997]

ELIZABETH K.B. SHULTZ, Assistant Professor of Clinical Psychiatry and Behavioral Sciences
B.S. (Indiana, Bloomington 2005); D.O. (Kansas City 2009) [2013]

JACQUELINE M. SHUPLOCK, Assistant Professor of Pediatrics
B.S. (San Diego State 2005); M.D. (Ohio State 2009); M.S. (Vanderbilt 2015) [2016]

JOHN L. SHUSTER, Jr., Clinical Professor of Psychiatry and Behavioral Sciences
B.A. (Tennessee, Chattanooga 1983); M.D. (Emory 1987) [2010]

KATHERINE A. SHUSTER, Assistant Professor of Pathology, Microbiology and Immunology

YU SHYR, Harold L. Moses Chair in Cancer Research; Professor of Biostatistics; Professor of Health Policy; Professor of Biomedical Informatics; Chair of the Department of Biostatistics; Director of the Center for Quantitative Sciences
B.B.A. (Tamkang [Taiwan] 1985); M.S. (Michigan State 1989); Ph.D. (Michigan 1994) [1994]

GHODRAT A. SIAMI, Professor of Medicine, Emeritus

KATHERINE L. SIBLER, Assistant in Medicine
B.S.N. (Florida State 2006); M.S.N. (Vanderbilt 2008) [2010]

WIAAN SIEGEL, Adjunct Research Professor of Medicine
A.B. (Bowdoin 1981); Ph.D. (California, San Francisco 1987) [2006]

KARA KIMBERLY SIEGRIST, Associate Professor of Anesthesiology
B.S. (Pittsburg State 2007); M.D. (Oklahoma 2011) [2016]

JOHANNA CAROLINA SIERRA, Research Instructor in Medicine
Ph.D. (Texas, Galveston 2010) [2017]

RIGOBERTO L. SIERRA-ANDERSON, Assistant Clinical Professor of Anesthesiology
B.S. (Georgia State 2000); M.D. (Medical College of Georgia 2004) [2008]

EDWARD D. SIEW, Associate Professor of Medicine
B.A. (Johns Hopkins 1995); M.D. (Chicago 1999); M.S.C.I. (Vanderbilt 2007) [2008]

MOHAMMED SIKA, Research Professor of Medicine

BANTAYEHU SILESHI, Assistant Professor of Anesthesiology
B.S. (California, San Diego 2000); M.D. (Johns Hopkins 2004) [2014]

ALLEN K. SILLS, Jr., Professor of Neurological Surgery; Professor of Orthopaedic Surgery and Rehabilitation
B.S. (Mississippi State 1986); M.D. (Johns Hopkins 1990) [2009]

WILSON PEREIRA SILVA, Adjunct Assistant Professor

ANTONIA SILVA-HALE, Assistant Professor of Clinical Medicine

HEIDI J. SILVER, Research Associate Professor of Medicine
B.S. (Massachusetts 1977); M.S., Ph.D. (Florida International 1991, 2001) [2003]

NABIL SIMAAN, Professor of Mechanical Engineering; Professor of Otolaryngology; Professor of Computer Science

KATHLEEN SIMCOE, Assistant in Pediatrics
B.S., M.Ed. (Vanderbilt 2007, 2008) [2016]

RICHARD SIMEURY, Louise B. McCavock Chair in Molecular Physiology and Biophysics; Professor of Molecular Physiology and Biophysics
A.B. (California, Berkeley 1976); Ph.D. (California, Los Angeles 1984) [2016]

GALILEO ALOHA-OLA SIMMONS, Assistant in Anesthesiology
B.S.N. (Murray State 2012); M.S.N. (Vanderbilt 2016) [2017]

HENRY C. SIMMONS III, Assistant Clinical Professor of Oral and Maxillofacial Surgery (Orthodontics)
B.S. (Tennessee Technological 1971); D.D.S. (UT Health Science Center [Tennessee] 1977) [1993]

JILL H. SIMMONS, Associate Professor of Pediatrics
B.A. (Tennessee 1995); M.D. (UT Health Science Center [Tennessee] 2000) [2008]

MEGAN P. SIMMONS, Assistant Professor of Nursing; Assistant in Psychiatry and Behavioral Sciences
B.A. (Elon 2003); M.S.N., Post-Master’s in Nursing, D.N.P. (Vanderbilt 2005, 2013, 2013) [2013]

SANDRA F. SIMMONS, Professor of Medicine

BARBARA CRUTCHER SIMPSON, Assistant in Medicine
M.S.N. (Vanderbilt 2011) [2017]

LUCIEN C. SIMPSON, Clinical Instructor in Dermatology
B.A. (Lipscomb 1969); M.D. (Washington University 1973) [1978]

TERESA L. SIMPSON, Assistant in Medicine
A.D. (Aquinas College [Tennessee] 1993); M.S.N. (Vanderbilt 2009) [2010]

ANGELA F. SIMS EVANS, Associate in Obstetrics and Gynecology
B.S. (Tennessee State 1993); M.S.N. (Tennessee 1996) [2010]

ROBERT J. SINARD, Associate Professor of Otolaryngology
A.B. (Harvard 1985); M.D. (Michigan 1989) [2005]

ROBBIN B. SINATRA, Assistant Clinical Professor of Ophthalmology
B.S., M.D. (Tennessee 1997) [1998]

VANDERBILT UNIVERSITY
Faculty
SUDHA P. SINGH, Associate Professor of Clinical Pediatrics; Associate Professor of Clinical Radiology and Radiological Sciences
M.B.B.S., M.D. (Sawai Man Singh Medical [India] 1987, 1990) [2002]

ASHLEY N. SINGLETON, Assistant in Medicine
B.S. (Middle Tennessee State 2004); M.S.N. (Vanderbilt 2008) [2016]

DI'NET SINTIM-AMOAH, Assistant Clinical Professor of Pediatrics
B.S. (Spelman 2000); M.D. (Morehouse 2004) [2013]

MARCY ANN SPIES, Assistant Professor of Hearing and Speech Sciences
B.S., M.S. (Western Kentucky 1985, 1987) [2008]

CHRISTOPHER M. SIZEMORE, Assistant Professor of Clinical Obstetrics and Gynecology
B.S. (North Florida 2001); D.O. (Nova Southeastern 2005) [2014]

ERIC P. SKAAR, Ernest W. Goodpasture Chair in Pathology; Professor of Pathology, Microbiology and Immunology; Director, Microbial Path Program
B.S. (Wisconsin 1996); M.P.H., Ph.D. (Northwestern 2002, 2002) [2005]

MAJA SKIKIC, Assistant Professor of Psychiatry and Behavioral Sciences
B.S. (Newcomb 2005); M.D. (Vanderbilt 2012) [2016]

EMILY A. SKOTTE, Assistant in Medicine; Instructor in Clinical Nursing
B.S. (Louisiana State 2008); M.S.N. (Vanderbilt 2012) [2012]

JASON M. SLAGLE, Research Associate Professor of Anesthesiology

JILL R. SLAMON, Senior Associate in Obstetrics and Gynecology
B.S. (Michigan State 2003); M.A. (National-Louis University [Illinois]) 2005); M.G.C. (Northwestern 2011) [2011]

JAMES C. SLAUGHTER, Associate Professor of Biostatistics
B.S. (Tulane 1998); M.S. (University of Washington 2000); Dr.P.H. (North Carolina 2007) [2007]

CHRISTOPHER SLOBOGIN, Milton R. Underwood Chair in Law; Professor of Law; Professor of Psychiatry and Behavioral Sciences; Director, Criminal Law Program
A.B. (Princeton 1973); J.D., LL.M. (Virginia 1977, 1979) [2008]

DAVID ALAN SLOSKY, Assistant Professor of Medicine; Assistant Professor of Emergency Medicine
B.S. (Tulane 1972); M.D. (Colorado 1976) [2005]

BONNIE S. SLOVIS, Professor of Medicine, Emerita
A.B. (Wesleyan [Georgia] 1966); M.Ed. (Georgia State 1975); M.S. (Georgia Institute of Technology 1981); M.D. (Emory 1990) [1996]

COREY M. SLOVIS, Professor of Emergency Medicine; Professor of Medicine; Chair of the Department of Emergency Medicine
B.S. (Hobart and William Smith 1971); M.D. (New Jersey Medical 1975) [1992]

WALTER E. SMALLEY, JR., Professor of Medicine; Professor of Surgery; Associate Professor of Health Policy
B.S. (Emory and Henry 1981); M.D. (Duke 1985); M.P.H. (Vanderbilt 1997) [1991]

GEOFFREY H. SMALLWOOD, Clinical Instructor in Obstetrics and Gynecology
B.A. (Vanderbilt 1980); M.D. (Tulane 1985) [1993]

CHRISTOPHER P. SMELTZER, Clinical Professor of Pediatrics
B.A. (Baylor 1989); M.D. (Vanderbilt 1993) [1997]

ALLISON L. SMITH, Assistant Professor of Medicine
B.S. (Washington and Lee 2001); M.D. (Louisville 2005) [2010]

ANDREW HAROLD SMITH, Associate Professor of Anesthesiology; Associate Professor of Clinical Pediatrics

ANTHONY L. SMITH, Clinical Professor of Pediatrics
B.A. (Tennessee 1982); M.D. (UT Health Science Center [Tennessee] 1986) [2006]

AUSTIN SMITH, Instructor in Emergency Medicine
B.B.A., B.A. (Texas 2010, 2010); M.D. (Texas, San Antonio 2014) [2017]

BRADLEY E. SMITH, Professor of Anesthesiology, Emeritus
B.S. (Tulsa 1954); M.D. (Oklahoma 1957) [1969]

CARLENDRA SMITH, Assistant Professor of Clinical Pediatrics
B.S. (Hampton 2003); M.D. (East Tennessee State 2007) [2011]

CLAY BARTON SMITH, Associate Professor of Emergency Medicine; Associate Professor of Medicine; Associate Professor of Pediatrics

DAVID SAMUEL SMITH, Research Assistant Professor of Radiology and Radiological Sciences
B.S. (Texas 2001); A.M. (Harvard 2002); Ph.D. (Texas 2006) [2014]

DEREK K. SMITH, Research Assistant Professor of Biostatistics; Research Instructor in Oral and Maxillofacial Surgery
B.A. (DePauw 2004); D.D.S. (Indiana, Bloomington 2008); Ph.D. (Vanderbilt 2017) [2013]

GARY T. SMITH, Professor of Clinical Radiology and Radiological Sciences
B.S. (Tennessee 1978); M.D. (Texas, Southwestern Medical 1983) [2009]

HEIDI A. B. SMITH, Assistant Professor of Anesthesiology
B.S. (Nebraska 1995); M.D. (South Dakota 1999); M.S.C.I. (Vanderbilt 2005) [2014]

JARROD SMITH, Associate Professor of Biochemistry
B.Sc. (California, Santa Barbara 1992); Ph.D. ( Scripps Research Institute 1999) [1999]

JOSEPH A. SMITH, JR., William L. Bray Chair in Urology; Professor of Urologic Surgery
B.A. (Tennessee 1971); M.D. (UT Health Science Center [Tennessee] 1974) [1991]

JEFFREY R. SMITH, Associate Professor of Medicine
A.B. (Harvard 1985); Ph.D., M.D. (Texas, Southwestern Medical 1992, 1992) [1999]

JODY BARNWELL SMITH, Assistant in Surgery
B.S. (Tennessee Technological 2006); D.N.P. (UT Health Science Center [Tennessee] 2013) [2016]

JOSHUA CARL SMITH, Instructor in Biomedical Informatics
B.S. (Murray State 2006); M.S. (Illinois, Champaign 2009); M.S., Ph.D. (Vanderbilt 2012, 2016) [2016]

KEEGAN M. SMITH, Associate Clinical Professor of Pediatrics
B.S. (Tennessee, Chattanooga 1998); M.D. (UT Health Science Center [Tennessee] 2002) [2008]

M. KEVIN SMITH, Assistant Professor of Clinical Medicine

KURT A. SMITH, Associate Professor of Emergency Medicine; Associate Professor of Pediatrics
B.A. (Rice 2001); M.D. (Harvard Medical 2005) [2009]

LOREN ELISA SMITH, Assistant Professor of Anesthesiology
B.A. (DePauw 2004); Ph.D., M.D. (Cincinnati 2010, 2012) [2016]

MARYLOU SMITH, Assistant Professor of Clinical Obstetrics and Gynecology
B.S.N. (Saint John Fisher 2005); M.S.N. (Vanderbilt 2006) [2013]

MICHAEL LEE SMITH, Associate Professor of Dermatology
B.S. (Davidson 1977); M.S., M.D. (East Carolina 1979, 1983) [1994]

PAIGE J. SMITH, Associate Clinical Professor
B.S. (Tennessee 1998); M.D. (UT Health Science Center [Tennessee] 2002) [2005]

RAPHAEL F. SMITH, Professor of Medicine, Emeritus
B.A. (Vanderbilt 1955); M.D. (Harvard Medical 1960) [1969]

RICHARD P. SMITH, Assistant Clinical Professor of Pediatrics
B.S. (Samford 1998); M.D. (Mercer 2004) [2007]

SCOTT ALAN SMITH, Assistant Professor of Medicine; Assistant Professor of Pathology, Microbiology and Immunology

SETH A. SMITH, Associate Professor of Radiology and Radiological Sciences; Associate Professor of Ophthalmology and Visual Sciences; Associate Professor of Biomedical Engineering
B.S., B.S. (Virginia Polytechnic Institute 2001, 2001); Ph.D. (Johns Hopkins 2006) [2009]

STEPHEN J. SMITH, Assistant Professor of Clinical Medicine

TATANISHA P. SMITH, Assistant Clinical Professor of Pediatrics
B.S. (Florida Agricultural and Mechanical 2001); M.D. (Meharry Medical 2005) [2014]
TERRENCE A. SMITH, Assistant Professor of Medicine
A.A., B.S. (Ohio State 1985, 1990); M.D. (Wright State 1997) [2003]

VALERIE SMITH-GAMBLE, Assistant Clinical Professor of Psychiatry and Behavioral Sciences
B.S. (Ohio 1975); M.Sc., M.D. (Indiana, Indianapolis 2003, 2003) [2016]

JAMES D. SNELL, JR., Professor of Medicine, Emeritus
B.S. (Centenary [New Jersey] 1954); M.D. (Vanderbilt 1958) [1963]

DAVID J. SNOODGRASS, Assistant Clinical Professor of Oral and Maxillofacial Surgery

BARBARA M. SNOOK, Assistant Professor of Pediatrics
B.A. (Arkansas 1973); M.D. (Arkansas, Little Rock 1977) [1982]

LAURA L. SNYDER, Instructor in Clinical Ophthalmology and Visual Sciences
B.S. (Yale 2008); M.D. (Case Western Reserve 2012) [2016]

ROBERT B. SNYDER, Adjunct Assistant Professor of Orthopaedic Surgery and Rehabilitation
B.A. (Kalamaoo 1968); M.D. (Wayne State 1972) [1977]

STANLEY O. SNYDER, Jr., Associate Clinical Professor of Surgery at St. Thomas Medical Center
B.A. (Centre 1968); M.D. (Louisville 1972) [1995]

RACHEL SOBEL, Assistant Professor of Ophthalmology and Visual Sciences
B.A. (Harvard 1999); M.D. (California, San Francisco 2006) [2015]

CHRISTOPHER M. SOBEE, Assistant Professor of Clinical Anesthesiology
B.A. (Wake Forest 2005); M.D. (Texas, San Antonio 2009) [2014]

JENNA M. HELMER SOBEY, Assistant Professor of Anesthesiology
B.S. (Texas A&M 2005); M.D. (Texas, San Antonio 2009) [2014]

LAURA LEONE SOHACKI, Assistant in Pediatrics
B.S.N. (Grand Valley State 2009); M.S.N. (Wayne State 2014) [2014]

ANDREW G. SOKOLOW, Assistant Professor of Pediatrics

KIRA SOLDANI, Assistant in Surgery
B.S.N. (Lipscomb 2007); M.S.N. (Belmont 2013) [2014]

BARBARA J. SOLOMON, Assistant Professor of Clinical Pediatrics
M.D. (McGill [Canada] 1998) [2016]

GARY S. SOLOMON, Professor of Neurological Surgery; Associate Professor of Psychiatry and Behavioral Sciences; Associate Professor of Orthopaedic Surgery and Rehabilitation
B.A. (Georgia 1974); M.S. (Mississippi State 1975); Ph.D. (Texas Tech University 1983) [1996]

CARMEN C. SOLORZANO, Professor of Surgery
B.S., M.D. (Florida 1989, 1993) [2010]

SUSEELA SOMARAJAN, Research Instructor in Surgery
B.Sc. (Kerala [India] 1993); M.Sci. (University College, Warangal [India] 1992); B.Ed. (Kerala [India] 1993); M.Phil. (University College, Warangal [India] 1996); Ph.D. (Vanderbilt 2010) [2011]

BYEONGWOON SONG, Adjunct Associate Professor of Pharmacology
B.S. (Seoul National [Korea] 1987); Ph.D. (Columbia 1997) [2017]

HYUN DEOK SONG, Research Assistant Professor of Medicine
B.S. (Konkuk [Korea] 2002); Ph.D. (Cincinnati 2012) [2018]

WENQIANG SONG, Research Instructor in Medicine
B.S. (Beijing Institute of Chemical Engineering [China] 2002); Ph.D. (Peking [China] 2009) [2015]

HASAN H. SORNETZURK, Assistant Professor of Neurology
M.D. (Marmara [Turkey] 1999) [2010]

KELLY L. SOPKO, Assistant Professor of Medicine
B.S. (Notre Dame 1997); M.D. (Kentucky, Lexington 2001) [2007]

LAURA SORABELLA, Assistant Professor of Anesthesiology
B.S. (Illinois, Champagne 2007); M.D. (California, Los Angeles 2011) [2017]

MARY ROGERS SORAY, Assistant in Medicine
B.S. (Mississippi 2009); M.S.N. (Vanderbilt 2011) [2016]

IBERIA ROMINA SOGA, Visiting Assistant Professor of Medicine
M.S. (Louisiana State 1999); B.A. (Tulane 1999); M.D. (Minnesota 2007) [2010]

JONATHAN H. SOSLOW, Assistant Professor of Pediatrics
B.A. (Williams 1999); M.D. (Louisiana State, New Orleans 2003); M.S.C.I. (Vanderbilt 2014) [2010]

JEFFREY A. SOSMAN, Adjunct Professor of Medicine
B.A. (Brandeis 1976); M.D. (Yeshiva 1981) [2001]

CINQUE SOTO, Research Associate Professor of Pediatrics
B.S., B.S. (Rutgers, 1997, 1997); Ph.D. (Columbia 2006) [2016]

E. MICHELLE SOUTHARD-SMITH, Associate Professor of Medicine; Associate Professor of Cell and Developmental Biology
B.S. (Okayama 1987); Ph.D. (Texas, Southwestern Medical 1992) [1999]

MAX SPADERNA, Assistant Clinical Professor of Psychiatry and Behavioral Sciences
B.A. (Massachusetts 2006); M.D. (Massachusetts, Boston 2010) [2015]

ANTHONY J. SPAHR, Adjunct Assistant Professor of Hearing and Speech Sciences

THOMAS KENNETH SPAIN, JR., Assistant Clinical Professor of Medicine
B.S. (Alabama, Huntsville 2006); M.D. (Vanderbilt 2010) [2014]

LUCY B. SPALLUTO, Assistant Professor of Radiology and Radiological Sciences

JONATHAN M. SPANIER, Clinical Professor of Pediatrics
B.S. (Duke 1999); M.D. (Vanderbilt 2003) [2008]

MATTHEW D. SPANN, Assistant Professor of Surgery
B.S. (Samford 2004); M.D. (Alabama, Birmingham 2008) [2013]

CHRISTY L. SPARKMAN, Assistant in Medicine
A.A.S. (Itawamba Community 1990); M.S.N. (Vanderbilt 2000) [2004]

HOLLY C. SPARKS, Assistant Professor of Clinical Pediatrics
B.S. (Samford 1996); D.O. (Nova Southeastern 2001) [2015]

NIKI SLOANE SPARKS, Assistant in Plastic Surgery; Adjunct Assistant Professor of Nursing
A.D.N. (Western Kentucky 2001); M.S.N. (Vanderbilt 2014, 2016) [2017]

MARCIA E. SPEAR, Assistant in Plastic Surgery; Adjunct Assistant Professor of Nursing
A.D.N. (Western Kentucky 2001); M.S.N. (Vanderbilt 2014, 2016) [2017]

STEPHANIE M. SPENCE, Assistant in Pediatrics
B.S.N. (Tennessee, Chattanooga 2002); M.S.N. (Vanderbilt 2006) [2010]

C. NORMAN SPENCER, Clinical Professor of Pediatrics
B.A., M.D. (Vanderbilt 1972, 1976) [1979]

DAN M. SPENGLER, Professor of Orthopaedic Surgery and Rehabilitation, Emeritus
M.D. (Baldwin-Wallace 1962); M.D. (Michigan 1966) [1983]

THEODORE SPEROFF, Professor of Medicine, Emeritus
B.S., Ph.D., M.S. (Akor 1974, 1979, 1984); Ph.D. (Case Western Reserve 1987) [1999]

BENNETT M. SPETALNICK, Associate Clinical Professor of Obstetrics and Gynecology

JAMIE BRADFORD SPICER, Assistant in Medicine
B.S. (Lipscomb 1983); M.S.N. (Vanderbilt 1996) [2012]

W. ANDERSON SPICKARD III, Assistant Dean for Educational Informatics and Technology; Professor of Medicine; Associate Professor of Biomedical Informatics
B.A. (North Carolina 1985); M.D. (Vanderbilt 1989); M.S. (Virginia 1995) [1995]

W. ANDERSON SPICKARD, JR., Professor of Medicine, Emeritus
B.A., M.D. (Vanderbilt 1953, 1957) [1963]

ALEXANDRIA SPIDALIERI, Assistant in Pediatrics
B.S. (Boston University 2006); M.Ed. (Vanderbilt 2010) [2016]

BENJAMIN W. SPILLER, Associate Professor of Pharmacology; Associate Professor of Pathology, Microbiology and Immunology
B.S. (California, Davis 1994); Ph.D. (California, Berkeley 1999) [2006]

KURT P. SPINDLER, Adjunct Professor of Orthopaedic Surgery and Rehabilitation
B.A. (Rutgers, Newark 1981); M.D. (Pennsylvania 1985) [1991]
PATRICIA A. TRANGENSTEIN, Professor of Nursing; Professor of Biomedical Informatics
B.S.N. (Vanderbilt 1975); M.S.N. (Saint Louis 1979); Ph.D. (New York 1988) [2002]

LINDSAY GEBHART TRANTUM, Assistant in Anesthesiology
B.A. (Tennessee 2005); M.S.N. (Vanderbilt 2007) [2009]

ROBERT N. TREECE, Associate Clinical Professor of Pediatrics
B.S. (Auburn 1993); M.D. (South Alabama 1997) [2007]

DAVID B. TRENNER, Senior Associate in Orthopaedic Surgery and Rehabilitation
B.S. (Portland State 1986); D.P.M. (California College of Podiatric Medicine 1990) [2008]

NORMAN EDWIN TREVATHAN, Amos Christie Chair; Professor of Pediatrics; Professor of Neurology
B.S. (Lipscomb 1977); M.P.H., M.D. (Emory 1982, 1982) [2016]

ELIZABETH G. TRIGGS, Clinical Professor of Pediatrics
B.S. (North Carolina 1977); M.D. (Mississippi 1981) [1986]

SUSANNE TROPEZ-SIMS, Professor and Associate Dean of Clinical Sciences
B.S. (Pennsylvania 1977); M.P.H., M.D. (Emory 1982, 1986) [1993]

DAULAT R. TULSIANI, Professor of Obstetrics and Gynecology

MD JASHIM UDDIN, Research Associate Professor of Biochemistry

MD IMAM UDDIN, Research Instructor in Ophthalmology and Visual Sciences

FLORA A. M. UKOLI, Adjunct Professor of Medicine

SHERLYN PEROLINA UMAYAM, Assistant in Medicine
B.S.N. (Cumberland 2010); M.S.N. (Vanderbilt 2017) [2017]

ROBERT N. TREECE, Associate Clinical Professor of Pediatrics
B.A. (Vassar 2006); M.D. (Texas A&M 2011) [2017]

JACOB G. UNGER, Assistant Clinical Professor of Plastic Surgery
B.S. (Tulane 2005); M.D. (New York 2009) [2015]

CATHERINE LINDSEY UNDERWOOD, Assistant in Psychiatry and Behavioral Sciences
B.A. (Lambuth 2008); M.S. (Yale 2012) [2016]

KIM M. UNERTL, Assistant Professor of Biomedical Informatics
B.S. (Marquette 1996); M.S.; Ph.D. (Vanderbilt 2006, 2009) [2010]

DEBORAH M. UNGER, Assistant Professor of Medicine
B.S. (East Tennessee State 2014) [2017]

DAULAT R. TULSIANI, Professor of Obstetrics and Gynecology, Emeritus
B.S. (Ewing Christian [India] 1962); M.S., Ph.D. (Allahabad [India] 1964, 1968) [1976]

JESSICA TURNBULL, Assistant Professor of Pediatrics
B.S. (John Carroll 2002); M.D. (Cincinnati 2006); M.A. (University of Washington 2013) [2013]

CHRISTOPHER P. TURNER, Assistant Professor of Clinical Medicine

BERNARD TURNBULL, Professor of Pediatrics
B.A. (Trinity [Texas] 1970); M.D. (Texas, Southwestern Medical 1974) [2015]

SUSANNE TROPEZ-SIMS, Professor and Associate Dean of Clinical Affiliations at Meharry Medical College; Adjunct Professor of Pediatrics at Vanderbilt University School of Medicine
B.S. (Pennsylvania 1977); M.P.H., M.D. (Emory 1982, 1986) [1993]

LINDSAY GEBHART TRANTUM, Assistant in Anesthesiology
B.S. (Tennessee 2013); M.S.N. (Vanderbilt 2015) [2017]

TIMOTHY H. TRONE, Assistant Professor of Otolaryngology
B.S. (Trinity [Texas] 1970); M.D. (Texas, Southwestern Medical 1974) [2015]

SUSANNE TROPEZ-SIMS, Professor and Associate Dean of Clinical Affiliations at Meharry Medical College; Adjunct Professor of Pediatrics at Vanderbilt University School of Medicine
B.S. (Pennsylvania 1977); M.P.H., M.D. (Emory 1982, 1986) [1993]

JORDAN ASHLEY TROTTER, Assistant in Pediatrics
B.S. (Tennessee 2013); M.S.N. (Vanderbilt 2015) [2017]

MOLLY TRUESDALE, Assistant in Surgery
B.A. (Mississippi 2002); M.S.N. (Vanderbilt 2004) [2014]

LISA M. TRUETT, Assistant in Medicine

CARMEN RODRIGUEZ TUCHMAN, Assistant Professor of Medicine [2017]

Laurie A. TAYLOR, Clinical Instructor in Pediatrics
B.S. (Freed-Hardeman 2008); M.P.H. (North Carolina 2010); M.D. (East Tennessee State 2014) [2017]

DAULAT R. TULSIANI, Professor of Obstetrics and Gynecology, Emeritus
B.S. (Ewing Christian [India] 1962); M.S., Ph.D. (Allahabad [India] 1964, 1968) [1976]

JESSICA TURNBULL, Assistant Professor of Pediatrics
B.S. (John Carroll 2002); M.D. (Cincinnati 2006); M.A. (University of Washington 2013) [2013]

CHRISTOPHER P. TURNER, Assistant Professor of Clinical Medicine
B.A., M.D. (Missouri, Kansas City 2005, 2005); M.M.H.C (Vanderbilt 2016) [2017]

JUSTIN HARRIS TURNER, Associate Professor of Otolaryngology; Associate Professor of Biomedical Engineering
B.E. (Vanderbilt 1998); Ph.D., M.D. (Medical University of South Carolina 2006, 2006) [2012]

FRANK D. TUZZIO, Assistant Clinical Professor of Oral and Maxillofacial Surgery
B.A., D.D.S. (Ohio State 2006, 2010); M.S. (Toledo 2013) [2014]

SHARON KELLY TYLER, Assistant in Surgery
B.A. (Tennessee 2000); M.S.N. (Vanderbilt 2007) [2016]

MATTHEW JOHN TYSKA, Cornelius Vanderbilt Chair in Cell and Developmental Biology; Professor of Cell and Developmental Biology
B.S. (Notre Dame 1992); M.S.; (Wyoming 1994); Ph.D. (Vermont 1999) [2004]

TAMMY C. TZE-MING, Assistant Professor of Pediatrics
B.S. (Furman 2001); M.D., M.P.H. (Vanderbilt 2005, 2014) [2013]

SARA L. VRIJENHOF, Assistant Professor of Pediatrics; Assistant Professor of Medicine
B.S. (Bennett 1973); M.S., M.D. (North Carolina 1973, 1973) [1993]

DAVID R. VAGO, Associate Professor of Physical Medicine and Rehabilitation; Associate Professor of Psychiatry and Behavioral Sciences
B.A. (Rochester 1997); M.S., Ph.D. (Utah 2002, 2005) [2016]

JAVIER L. VÁZQUEZ, Assistant Professor of Pediatrics
B.S. (Albany 1999); M.D. (New York 2005) [2015]

BURTON V. VARDEN, Associate Professor of Pediatrics
B.S. (Oregon State University 1985); M.D. (Medical University of South Carolina 2006) [2012]

TAMMY C. TZE-MING, Assistant Professor of Pediatrics
B.S. (Furman 2001); M.D., M.P.H. (Vanderbilt 2005, 2014) [2013]

SARA L. VRIJENHOF, Assistant Professor of Pediatrics; Assistant Professor of Medicine
B.A. (Minnesota 1998); Ph.D., M.D. (Mayo Clinic 2005, 2005) [2012]

JAN VAN EYS, Clinical Professor of Pediatrics, Emeritus
Ph.D. (Vanderbilt 1955); M.D. (University of Washington 1966) [1957]

LARRY VAN HORN, Associate Professor of Management; Associate Professor of Law; Associate Professor of Health Policy; Faculty Director, Health Care Program

LUC VANDERHEYNDE, Assistant Professor of Pediatrics
B.S. (Brussel) [2001]; M.S.N. (Vanderbilt 2001, 2014) [2013]

SARA L. VRIJENHOF, Assistant Professor of Pediatrics; Assistant Professor of Medicine
B.A. (Minnesota 1998); Ph.D., M.D. (Mayo Clinic 2006, 2006) [2012]
ROBERTO M. VANACORE, Assistant Professor of Medicine
M.S. (Universidad Austral de Chile 1996); Ph.D. (Kansas 2005) [2008]

ELIZABETH H AY VANCE, Associate in Neurological Surgery

ANN M. VANDER WOUDE, Assistant in Pediatrics
B.S.N. (Iowa 1982); M.S.N. (Vanderbilt 1990); R.N., M.S.N., F.N.P., F.P.N. [1993]

DAWN M. VANDERHOEF, Assistant Professor of Nursing; Assistant Professor of Psychiatry and Behavioral Sciences
A.D.N. (Western Technical 1994); B.S.N. (Wisconsin, West Bend 1999); M.S.N. (Vanderbilt 2000); D.N.P., Ph.D. (UT Health Science Center, [Tennessee] 2009, 2012) [2013]

F. KARL VANDEVEN, Assistant Clinical Professor of Medicine

RENE G. VANDUEVOIRDE III, Associate Professor of Pediatrics
B.S., M.D. (Vanderbilt 1992, 1996) [2016]

EDUARD E. VASILEVSKIS, Assistant Professor of Medicine
B.S. (California, San Diego 1997); M.D. (Oregon Health and Science University 2001); M.P.H. (Vanderbilt 2013) [2008]

RICHARD VAUGHN, Clinical Instructor in Pediatrics
B.S. (Lipscomb 1992); M.D. (Tennessee, Memphis 1997) [2016]

STEPHANIE VAUGHN, Assistant Clinical Professor of Psychiatry

RUTH ANN VEACH, Research Instructor in Medicine

OLIVIA J. VEATCH, Adjunct Instructor in Neurology
B.S. (Kansas 2003); M.S. (Taiwan, Honolulu 2006); Ph.D. (Vanderbilt 2013) [2015]

JULIANNE HAINES WAGNON, Assistant in Medicine
B.A. (City College of New York 1951); M.S., Ph.D. (Michigan 1952, 1956) [1961]

DAVID J. VIGERUST, Adjunct Assistant Professor of Neurological Surgery
B.S. (Texas, El Paso 1992); M.S. (Texas Tech University 1999); Ph.D. (Vanderbilt 2004) [2010]

ANNA VILGELEK, Research Assistant Professor of Pharmacology
M.Sc., M.D. (Russian State Medical University 2005, 2005); Ph.D. (Russian Academy of Sciences, [Russia] 2011) [2015]

VANNEY E. VILLARUZ, Clinical Instructor in Medicine

DAVID J. VIGERUST, Adjunct Assistant Professor of Neurological Surgery
B.S. (Texas, El Paso 1992); M.S. (Texas Tech University 1999); Ph.D. (Vanderbilt 2004) [2010]

ANNA VILGELEK, Research Assistant Professor of Pharmacology
M.Sc., M.D. (Russian State Medical University 2005, 2005); Ph.D. (Russian Academy of Sciences, [Russia] 2011) [2015]

DAVID J. VIGERUST, Adjunct Assistant Professor of Neurological Surgery
B.S. (Texas, El Paso 1992); M.S. (Texas Tech University 1999); Ph.D. (Vanderbilt 2004) [2010]

ANNA VILGELEK, Research Assistant Professor of Pharmacology
M.Sc., M.D. (Russian State Medical University 2005, 2005); Ph.D. (Russian Academy of Sciences, [Russia] 2011) [2015]
JOHN S. WARNER, Professor of Neurology, Emeritus
B.S. (University of the South 1982); M.D. (Vanderbilt 1985) [1965]

MELISSA A. WARREN, Assistant Professor of Medicine
B.S. (Angelo State 2007); M.D. (Texas, Houston 2011) [2017]

MICHAEL DALE WARREN, Adjunct Assistant Professor of Pediatrics
B.S. (Wake Forest 1999); M.D. (East Carolina 2003); M.P.H. (Vanderbilt 2009) [2009]

STEPHANIE LISE WARREN, Instructor in Clinical Surgery
B.A. (Virginia 2003); M.D. (Medical College of Georgia 2008) [2017]

ZACHARY E. WARREN, Associate Professor of Pediatrics; Associate Professor of Psychiatry and Behavioral Sciences; Associate Professor of Special Education
B.S. (William and Mary 1997); M.S., Ph.D. (Miami 2002, 2005) [2006]

CYNTHIA M. WASDEN, Assistant in Medicine
B.S.N. (Tennessee Technological 1993); M.S.N. (Vanderbilt 1997) [2004]

MARY KAY WASHINGTON, Professor of Pathology, Microbiology and Immunology

ALLISON MARIE WASSERMAN, Instructor in Pathology, Microbiology and Immunology
B.S. (Union College [New York] 2005); M.D. (Vanderbilt 2010) [2016]

BRIAN SCOTT WASSERMAN, Instructor in Medicine
B.S. (Cornell 2008); M.D., M.S.C.I. (Vanderbilt 2009, 2014) [2012]

DAVID H. WASSERMAN, Professor of Molecular Physiology and Biophysics; Director, Mouse Metabolic Phenotyping Center
B.S.c., M.Sc. (California, Los Angeles 1979, 1981); Ph.D. (Toronto [Canada] 1985) [1985]

GEETA P. WASUDEV, Adjunct Assistant Professor of Anesthesiology
B.S., M.D. (Bombay [India] 1957, 1961) [1972]

MICHAEL R. WATERMAN, Professor of Biochemistry, Emeritus
B.A. (Williamette 1961); Ph.D. (Oregon Health and Science 1969) [1992]

ALEX G. WATERSON, Research Associate Professor of Pharmacology; Research Associate Professor of Chemistry
B.S. (Mississippi State 1994); Ph.D. (Emory 1999) [2008]

KENNETH E. WATFORD, Assistant Professor of Clinical Otolaryngology

JACLYN C. WATKINS, Assistant Professor of Pathology, Microbiology and Immunology
B.S. (Cornell 2008); M.S. (California, Berkeley 2011); M.D. (California, San Francisco 2013) [2017]

SCOTT CHRISTOPHER WATKINS, Assistant Professor of Anesthesiology
B.S. (Georgia 1998); M.D. (Medical College of Georgia 2003) [2008]

CAROLINE SARAH WATNICK, Assistant Professor of Clinical Pediatrics
B.S. (Olivet Nazarene 1971); M.S.N. (Tennessee 1978) [2002]

LAURA L. WAYMAN, Associate Professor of Ophthalmology and Visual Sciences
B.A. (National, San Diego 1983); M.S. (Maryland 1985); M.D. (Mayo Clinic 1998) [2005]

ALISSA M. WEAVER, Cornelius Vanderbilt Chair; Professor of Cell and Developmental Biology; Professor of Pathology, Microbiology and Immunology

C. DAVID WEAVER, Associate Professor of Pharmacology; Associate Professor of Chemistry
B.S., Ph.D. (Tennessee 1989, 1994) [2003]

ELEANOR O. WEAVER, Assistant Professor of Clinical Medicine
B.A. (Rice 2008); M.D. (Baylor 2012) [2015]

KYLE DEREK WEAVER, Assistant Professor of Neurological Surgery; Assistant Professor of Otolaryngology
B.S. (Duke 1988); M.D. (North Carolina 1996) [2004]

LAUREN A. WEAVER, Assistant in Pediatrics
B.A. (Alabama, Huntsville 2006); M.S. (Auburn, Montgomery 2011) [2014]

SHEENA M. WEAVER, Assistant Professor of Clinical Anesthesiology
B.S. (Baldwin-Wallace 2001); M.D. (Case Western Reserve 2006) [2011]

LIZA M. WEAVIND, Professor of Anesthesiology; Professor of Surgery
M.B.B.Ch. (Witwatersrand [South Africa] 1993); M.Mgt. (Vanderbilt 2014) [2007]

LYNN E. WEBB, Assistant Dean for Faculty Development; Assistant Professor of Medical Education and Administration; Adjunct Assistant Professor of Nursing

TRENIA LYN WEBB, Assistant Professor of Clinical Obstetrics and Gynecology
B.S. ( Lipscomb 1994); M.D. (Tennessee, Memphis 2003) [2009]

WARREN W. WEBB, Professor of Psychiatry, Emeritus
B.A. (North Carolina 1947); Ph.D. (Duke 1952) [1955]

CHASE JEFFREY WEBBER, Assistant Professor of Clinical Medicine
B.A. (Tufts 2009); D.O. (Kirkville College of Osteopathic Medicine 2014) [2017]

STEVEN A. WEBBER, James C. Overall Chair in Pediatrics; Professor of Pediatrics; Chair of the Department of Pediatrics

ROBERT J. WEBSTER III, Associate Professor of Mechanical Engineering; Associate Professor of Otolaryngology; Associate Professor of Electrical Engineering; Associate Professor of Medicine; Associate Professor of Urologic Surgery; Assistant Professor of Neurological Surgery
B.S. (Clemson 2002); M.S., Ph.D. (Johns Hopkins 2004, 2007) [2008]

AMY GREGORY WEEKS, Associate Professor of Clinical Obstetrics and Gynecology
B.A. (Vanderbilt 1981); M.D. (UT Health Science Center [Tennessee] 1985) [2005]

WEI-QI WEI, Assistant Professor of Biomedical Informatics
M.Med. (Peking Union Medical [China] 2003); Ph.D. (Minnesota 2012) [2014]

DANIEL S. WEIKERT, Associate Professor of Clinical Ophthalmology and Visual Sciences
B.S. (Indiana, Bloomington 1987); M.D. (Vanderbilt 1991) [1995]

DOUGLAS R. WEIKERT, Associate Professor of Ophthalmology and Rehabilitation; Associate Professor of Plastic Surgery
B.S., M.D. (Vanderbilt 1983, 1987) [1993]

P. ANTHONY WEIL, Professor of Molecular Physiology and Biophysics, Emeritus
B.S. (Northern Illinois 1972); Ph.D. (Texas, Houston 1976) [1986]

STUART T. WEINBERG, Associate Professor of Biomedical Informatics; Associate Professor of Pediatrics
B.A. (Dartmouth 1981); M.D. (Cincinnati 1985) [2004]

ELIZABETH E. WEINER, Senior Associate Dean for Informatics; Centennial Independence Foundation Professor of Nursing; Professor of Biomedical Informatics
B.S.N. (Kentucky, Lexington 1975); M.S.N. (Cincinnati 1978); Ph.D. (Kentucky, Lexington 1982) [2000]

MATTHEW BRENT WEINER, Norman Ty Smith Chair in Patient Safety and Medical Simulation; Professor of Anesthesiology; Professor of Biomedical Informatics; Professor of Medical Education and Administration (VUMC); Professor of Civil and Environmental Engineering
M.S., B.S. (Stanford 1978, 1982); M.D. (California, San Diego 1982) [2004]
VIVIAN LEE WEISS, Assistant Professor of Pathology, Microbiology and Immunology
B.A. (Columbia 2004); Ph.D., M.D. (Johns Hopkins 2012, 2012) [2017]

ASLI WEITKAMP, Assistant Professor of Biomedical Informatics

JORN-HENDRIK WEITKAMP, Associate Professor of Pediatrics
M.D. (Ulm [Germany] 1995) [2006]

AMY S. WELT, Assistant Professor of Pediatrics
B.A. (Texas 2003); M.S., Ph.D. (Vanderbilt 2006, 2011) [2013]

GLENN A. WEITZMAN, Assistant Clinical Professor of Obstetrics and Gynecology
B.S. (Stony Brook 1978); M.D. (Johns Hopkins 1982) [1996]

JOHN R. WERTHER, Associate Clinical Professor of Oral and Maxillofacial Surgery
B.A. (San Diego State 1988); M.D. (Uniformed Services 1992) [2012]

J. JASON WENDEL, Assistant Clinical Professor of Plastic Surgery
B.S. (Texas 2003); M.D. (Louisville 2005) [2009]

W. SCOTT WEST, Assistant Clinical Professor of Psychiatry and Behavioral Sciences
B.A. (Tennessee 1970); M.D. (UT Health Science Center [Tennessee] 1982) [1986]

C. WILLIAM WESTER, Associate Professor of Medicine
B.A. (Bowdoin 1987); M.D. (Dartmouth 1991); M.P.H. (Harvard 2010) [2008]

CAROLYN N. WESTER, Adjunct Research Assistant Professor of Medicine
B.A. (Dartmouth 1987); M.P.H. (Harvard 2008) [2013]

HOLLY WESTERVELT, Associate Professor of Clinical Neurology

MARGARET M. WHALEN, Adjunct Professor of Pharmacology
B.S. (South Dakota School of Mines and Technology 1979); Ph.D. (New Mexico 1984) [2013]

VALERIE N. WHATLEY, Assistant Professor of Clinical Pediatrics
B.S. (Kentucky, Lexington 1993); M.D. (South Alabama 1997) [2007]

ALEXANDRIA N. WHEELER, Assistant in Medicine
B.S. (Lipscomb 1998); M.S.M. (Trevcca Nazarene 2017) [2018]

ALLISON PAROSKIE WHEELER, Assistant Professor of Pathology, Microbiology and Immunology; Assistant Professor of Pediatrics
B.S., M.D. (Massachusetts 2001, 2006); M.S.C.I. (Vanderbilt 2013) [2011]

FERRIN C. WHEELER, Assistant Professor of Pathology, Microbiology and Immunology
B.S. (Purdue 1996); Ph.D. (Washington University 2002) [2011]

PAUL W. WHEELER, Assistant Clinical Professor of Medicine
B.S. (Samford 1973); M.D. (Alabama, Birmingham 1977) [1983]

WILLIAM O. WHATSELL, Jr., Professor of Pathology, Emeritus
B.S. (Wofford 1961); M.S., M.D. (Medical University of South Carolina 1964, 1966) [1983]

AMY S. WHIGHAM, Assistant Professor of Otolaryngology
B.A., B.S. (Rhodes College 1999, 1999); M.D. (Emory 2004) [2015]

AUSTIN WOODWARD WHITAKER, Clinical Instructor in Pediatrics
B.S. (Tennessee 2010); M.D. (East Tennessee State 2014) [2017]

KATIE D. WHITE, Instructor in Medicine
B.S. (Birmingham-Southern 1991); M.A., Ph.D. (Johns Hopkins 1993, 1995) [2008]

TOMAS C. WHITFIELD, Associate Professor of Clinical Medicine
B.S., M.S. (Johns Hopkins 2001); M.D. (UT Health Science Center [Tennessee] 2005) [2011]

CHRISTINE M. WHITWORTH, Clinical Instructor in Obstetrics and Gynecology
B.S. (Memphis 1978); M.D. (UT Health Science Center [Tennessee] 1983) [1991]
XIANGZHU ZHU, Research Assistant Professor of Medicine
  M.D. (Fudan [China] 1990); M.P.H. (Nantong Medical [China] 2004) [2017]
YUWEI ZHU, Senior Associate in Biostatistics
  M.D. (Shanghai Medical [China] 1993); M.S. (Texas, Houston 1998) [2004]
JOHN A. ZIC, Professor of Dermatology
  B.S. (Notre Dame 1987); M.D. (Vanderbilt 1991) [1995]
JOSEPH ZICKAFOOSE, Assistant Professor of Clinical Pediatrics
  B.S., M.D. (Case Western Reserve 2000, 2004) [2015]
JOZEF ZIENKIEWICZ, Research Associate Professor of Medicine
ANDRIES ZULSTRA, Associate Professor of Pathology, Microbiology and Immunology
CARL W. ZIMMERMAN, Frances and John C. Burch Chair in Obstetrics and Gynecology; Professor of Obstetrics and Gynecology
  B.S. (Peabody 1969); M.D. (UT Health Science Center [Tennessee] 1972) [1978]
ELI ZIMMERMAN, Assistant Professor of Neurology
  B.A. (Washington University 2006); M.D. (Vanderbilt 2010) [2015]
SANDRA S. ZINKE, Associate Professor of Medicine; Associate Professor of Cell and Developmental Biology
  B.S. (Indiana, Bloomington 1982); B.S. (Indiana, Indianapolis 1983); Ph.D. (Yale 1989); M.D. (Chicago 1995) [2006]
TERESA MEGAN ZOFFUTO, Assistant Professor of Clinical Medicine
  B.S. (Vanderbilt 2008); M.P.H., M.D. (Texas, San Antonio 2012, 2012) [2015]
ZHONGLIANG ZU, Research Assistant Professor of Radiology and Radiological Sciences
  B.S. (Hebei [China] 2001); M.S. (Chinese Academy of Sciences 2004); Ph.D. (Peking [China] 2008) [2012]
LISA C. ZUCKERWISE, Assistant Professor of Obstetrics and Gynecology
  B.S. (Cornell 2004); M.D. (Yeshiva 2009) [2016]
ANGELA MARIE ZUILL, Assistant in Medicine
  B.S. (North Alabama 2003); M.S.N. (Alabama, Huntsville 2006) [2017]
MARY M. ZUTTER, Louise B. Mcavock Chair; Professor of Pathology, Microbiology and Immunology
  B.S. (Newcomb 1976); M.D. (Tulane 1981) [2003]
JEFFREY P. ZWERNER, Assistant Professor of Dermatology
  B.A. (Washington University 1995); Ph.D. (Alabama, Huntsville 2002); M.D. (Alabama, Birmingham 2004) [2010]
LAURENCE J. ZWIEBEL, Cornelius Vanderbilt Chair in Biological Sciences; Professor of Biological Sciences; Professor of Pharmacology
  B.S. (Stony Brook 1980); B.S. (Michigan 1982); M.D. (Brandeis 1992) [1996]