



## Academic Catalog 2012-2013



Leaders In Education,  
Research & Patient Care

# Meharry Medical College



## Academic Catalog

### NOTICES

Meharry Medical College is accredited by the Southern Association of Colleges and Schools (SACS) to offer academic programs leading to the following degrees: Doctor of Philosophy, Doctor of Medicine, Doctor of Dental Surgery, Master of Science, Master of Science in Public Health, and Master of Science in Clinical Investigation. A Certificate in Public Health Policy also is offered. SACS is the college's primary accrediting agency and may be contacted at the following address, telephone number, or website to inquire about Meharry's accreditation status: Southern Association of Colleges and Schools, Commission on Colleges, 1866 Southern Lane, Decatur, Georgia 30033-4097; telephone 404-679-4500; Website: <http://www.sacs.org>.

The School of Medicine is a member of the Association of American Medical Colleges. It is accredited by the Liaison Committee of Medical Education of the American Medical Association and the American Association of Medical Colleges.

The School of Dentistry is a member of the American Dental Education Association and is fully accredited by the American Dental Association's Commission on Dental Accreditation.

Meharry Medical College is an EOE/AE employer and does not discriminate on the basis of gender, age, race, religion, color, national origin, handicap, veteran, or immigrant status in its admissions, employment and education programs or activities. Inquiries concerning the College's non-discrimination policies may be referred to the Office of the General Counsel, S.S. Kresge Learning Resources Center, (615) 327-6435, or to the Affirmative Action Officer, Office of the President, (615) 327-6904.

### DISCLAIMER

The information in this catalog is current and accurate as of August 2012. The College reserves the right to change prerequisites for admission, programs of study, courses, requirements for graduation, tuition and fees, policies, academic programs, lecturers, faculty, teaching staffs and other matters described in the catalog without prior notice. The Catalog is posted on the College's website and made available in hard copy by the Office of Student Services and Enrollment Management.

# Table of Contents

Notices .....	i
Disclaimer .....	i

## Contact Information

College Address .....	1
Key Contacts .....	1

## College Overview

Historical Sketch .....	2
College Motto .....	2
Mission Statement .....	2
Vision Statement .....	3
Core Values .....	3
Strategic Priorities .....	3
Campus Facilities .....	4

## Administration and Organization

Board of Trustees .....	8
Senior Administrative Staff .....	8
Organization Chart .....	9

## Life at Meharry Medical College

Metropolitan Nashville and Davidson County .....	10
Student Housing .....	10
Dining .....	11

## Services to Students

Privacy and Access to Academic Records .....	12
Meharry Student Directory Listing .....	13
Meharry Medical College Library .....	13
Academic Counseling .....	14
Counseling Services .....	15
Student Health Services .....	15
Student Health Insurance .....	16
Foreign Student Services .....	16
Students with Disabilities .....	17
Veteran Students .....	17
Meharry Bookstore .....	17
Meharry Copy Center .....	17
Mail Services .....	17
Campus Safety and Security .....	17
Parking and Vehicle Registration Policy .....	19
Religious Life .....	24
Student Life .....	25
Student Organizations .....	25
Student Governance .....	25
Meharry National Alumni Association .....	26
Office of Information Technology .....	26
Career Counseling .....	27

Meharry Vanderbilt Alliance .....	27
-----------------------------------	----

## **Academic Services**

Overview .....	28
Admission Process .....	28
New Student Orientation .....	29
Registration .....	30
Center for Educational Development and Support .....	30
Fall Convocation .....	31
Commencement .....	31
Academic Computing .....	31
Office of Lifelong Learning .....	32

## **General Financial Information**

Student Financial Services .....	33
Payment of Tuition and Fees .....	33
Disbursement of Excess Payments/Living Expense Funds .....	33
Tuition Refund Policy .....	34
Student Campus-Based Loans .....	34
Student Financial Aid .....	35
Disbursement of Aid .....	35
Scholarships .....	35

## **General Regulations**

General Regulations .....	37
Name Change .....	37
Requests for Licensure, Deferments, Verifications, and Transcripts .....	38
Requests for Duplicate Diplomas .....	38

## **Academic Regulations**

Grades .....	39
Other Symbols Related to Academic Standing .....	39
Leave of Absence .....	39
Withdrawal from a Course .....	39
Withdrawal from the College .....	40
Advancement .....	40
Unsatisfactory Academic Performance .....	40
Honor Policy .....	40
Procedures for Review and Appeal of Academic Dismissal Action .....	43
Student Dismissals and Appeals .....	44
Student Immunization Policy .....	46

## **School of Dentistry**

Administration .....	47
Department Chairpersons .....	47
Dental Education at Meharry Medical College .....	48
History of the School of Dentistry .....	48
Mission of the School .....	49
Objectives of the Academic Program .....	49
Patient Care .....	49
Research .....	50

<b>Academic Program .....</b>	<b>50</b>
Admission Procedures .....	51

Admission Requirements .....	51
Veteran Students .....	52
Admission to Combined Curriculum .....	52
Admission to Advanced Standing .....	53
Readmission .....	53
Admission of Graduates into Dentistry .....	54
Continuing Education Coursework .....	54
Post-Baccalaureate Program .....	54
<b>Academic Regulations</b>	
Requirements to Qualify for the D.D.S. Degree .....	54
Advising .....	55
Licensure .....	55
Examinations and Grades .....	55
Leave of Absence .....	56
Evaluation of Student Performance .....	57
Academic Performance and Progress .....	57
Unsatisfactory Academic Progress .....	57
Satisfactory Academic Progress .....	57
Academic Probation .....	58
Academic Citations .....	58
Dean's List .....	58
Honor Graduates .....	58
Auditing .....	58
Withdrawal from a Course .....	58
Withdrawal from Meharry Medical College .....	59
Academic Calendar 2012-2013 .....	59
<b>Financial Information</b>	
Tuition and Fees .....	60
Scholarships .....	60
Military Scholarships .....	61
Honors and Awards .....	61
Lectureships .....	61
<b>Course Descriptions</b>	
Basic Sciences .....	62
Department of Endodontics .....	64
Department of Oral and Maxillofacial Surgery .....	66
Department of Orthodontics .....	67
Department of Pediatric Dentistry .....	68
Department of Dental Public Health .....	69
Department of Restorative Dentistry .....	71
Department of Periodontics .....	73
Department of Oral Biology and Research .....	73
<b>Division of Graduate Programs</b>	
Objectives .....	74
Advanced Training .....	74
Continuing Dental Education .....	74
<b>School of Dentistry Faculty</b> .....	
	76

## School of Graduate Studies and Research

Administration .....	78
Graduate Studies and Research Education at Meharry .....	79
History of the School.....	79
Mission of the School.....	79
Objectives of the Academic Program .....	80
Research .....	80
 <b>Academic Programs</b>	
Doctoral Program .....	80
Combined M.D./Ph.D. Program.....	81
Master of Science in Public Health Program (MSPH).....	81
Master of Science in Clinical Investigation Program (MSCI) .....	81
Health Policy Certificate Program .....	82
 <b>Admissions</b>	
Applications .....	83
Procedures for Admission .....	83
Requirements for Admission .....	83
Special Student .....	84
Conditional Admission.....	84
Readmission.....	85
Transfer Course Credit.....	85
Courses Not Eligible for Transfer Course Credit.....	85
Enrollment Status .....	85
Attendance .....	85
 <b>Academic Regulations</b>	
Requirements for Ph.D., MSPH, MSCI .....	86
Advising .....	87
Career Counseling.....	87
Examinations and Grades .....	87
Academic Standing.....	88
Adding or Withdrawing from Course(s) .....	88
Leave of Absence and Withdrawal.....	89
Application for Graduation .....	89
Graduation Clearance .....	89
Academic Calendars .....	90
 <b>Financial Information</b>	
Tuition and Fees.....	93
Payment of Tuition and Fees .....	94
Financial Assistance.....	94
Emergency Loan Program .....	94
Honors and Awards 2012-2013.....	94
 <b>Course Descriptions</b>	
Doctoral Program .....	95
Core Curriculum .....	95
Advanced Graduate Course .....	96
Ph.D. Emphasis Programs .....	96
Biochemistry and Cancer Biology .....	96
Microbiology and Immunology.....	97
Neuroscience.....	99

Pharmacology.....	100
Physiology .....	102
Division of Public Health Practice (MSPH).....	103
Division of Clinical Investigation (MSCI) .....	107
Master in Health Sciences (MHS) .....	109
Health Policy Certificate Program .....	111
Objective .....	111
Admission Requirements.....	111
Course Descriptions .....	111
Policies and Procedures .....	115
<b>School of Graduate Studies and Research Faculty.....</b>	<b>116</b>

## **School of Medicine**

Administration.....	118
Department Chairpersons .....	118
Medical Education at Meharry Medical College .....	119
Mission of the School .....	119
Goals and Objectives of the Program.....	119
Strategic Goals for Educational Excellence .....	120

### **Academic Program**

The Curriculum .....	121
The Comprehensive Medical Review Program (CMRP).....	122

### **Admission**

Application .....	122
Reapplication .....	124
Applicants Requesting Transfer with Advanced Standing .....	124
Interviews.....	124
Early Decision Program.....	124
Medical Scholars Program .....	124
BS/MD Program .....	125
Dual Degree Programs.....	125
Technical Standards for Admission .....	126

### **Academic Regulations**

Requirements for the M.D. Degree .....	128
Examinations and Grades .....	128
Change of Grades .....	128
Grades for Off-Campus Courses.....	128
Subject Boards .....	128
Leave of Absence .....	129
Academic Standards and Policies .....	129
Student Evaluation and Promotion.....	129
Academic Standing.....	129
Satisfactory Academic Progress .....	130
Dean's List .....	130
Honors .....	130
Withdrawal from a Course .....	130
Withdrawal from the College .....	131
Student Dismissal.....	131
Request for Transfer from the School of Medicine.....	131
Academic Calendar .....	131

**Financial Information**

Tuition and Fees .....	132
------------------------	-----

**Course Descriptions**

## Basic Sciences Courses

Department of Professional and Medical Education .....	133
Mini Academic Program for Success (MAPS).....	133
Division of Clinical Skills and Competency.....	133
Division of Integrated Didactics .....	135

## Clinical Sciences Courses

Department of Family and Community Medicine .....	140
Department of Internal Medicine .....	141
Division of Neurology.....	144
Department of Obstetrics and Gynecology .....	144
Department of Pathology, Anatomy, and Cell Biology .....	145
Department of Pediatrics .....	146
Department of Psychiatry and Behavioral Science .....	147
Department of Radiology.....	148
Department of Surgery .....	149

<b>School of Medicine Faculty .....</b>	<b>151</b>
---	------------

# Meharry Medical College

## Contact Information

### College Address

Meharry Medical College  
1005 Dr. D. B. Todd Jr. Blvd.  
Nashville, TN 37208-3599  
[www.mmc.edu](http://www.mmc.edu)

### Key Contacts

General Inquiries: Campus Operator  
(615) 327-6000

Bookstore  
(615)327-6269

Office of Corporate Compliance  
(615) 327-6419  
[compliance@mmc.edu](mailto:compliance@mmc.edu)

Center for Educational Development and  
Support (CEDS)  
(615) 327-6760

Office of Information Technology  
(615) 327-6231  
[helpdesk@mmc.edu](mailto:helpdesk@mmc.edu)

Counseling Services  
(615) 327-6312

Office of the Registrar  
(615) 327-6223

Department of Public Safety and Security  
Non-Emergency: (615) 327-6290  
Emergency: (615) 327-6666

[recordsdepartment@mmc.edu](mailto:recordsdepartment@mmc.edu)

Department of Student Services and  
Enrollment Management  
(615) 327-6223

Office of Student Financial Aid  
(615) 327-6826  
[finaid@mmc.edu](mailto:finaid@mmc.edu)

Human Resources  
(615) 327-6336  
[humanresources@mmc.edu](mailto:humanresources@mmc.edu)

Office of Student Life  
(615) 327-6792  
[studentservices@mmc.edu](mailto:studentservices@mmc.edu)

Legal Affairs  
(615) 327-6141

Office of the Treasurer  
(615) 327-6220

Library  
(615) 327-6318

Pastoral Services  
(615) 327-6915

Mailroom  
(615) 327-6278

School of Dentistry  
(615) 327-6207

National Alumni Association, Inc.  
(615) 327-6266

School of Graduate Studies and Research  
(615) 327-6533

Office of Admissions and Recruitment  
(615) 327-6223  
[admissions@mmc.edu](mailto:admissions@mmc.edu)

School of Medicine  
(615) 327-6204

Student and Employee Health Services  
(615) 327-5757

# **Meharry Medical College Overview**

## **Historical Sketch**

Fifty years prior to its formal founding, a family of former slaves befriended a 16-year-old Ohio farmer, Samuel Meharry, while he was traveling through rural Kentucky. Touched by the kindness and generosity of the poor black family, Meharry promised to repay his debt of gratitude. Meharry and his brothers fulfilled that promise in 1876 by donating cash and property valued at \$30,000 toward the establishment of the medical department of Central Tennessee College. The Medical Department was established to educate freed slaves as health care professionals. The Freedmen's Aid Society of the Methodist Episcopal Church and the John F. Slater Fund were also contributors to the new academic institution.

A dental department within the Meharry Medical Department of Central Tennessee College was founded in 1884. This expanded the medical department's mission as the first institution in the deep South to train black dentists. It was also one of a few in that era to promote the recruitment of women into the profession.

In 1915, Meharry separated from Walden University, the successor institution to Central Tennessee College, and received a charter from the State of Tennessee. However, Meharry Medical College retained its affiliation with the Methodist Church. In 1916, bylaws for the governance of the College were adopted by an 18-member Board of Trustees. At the same time, the board appointed Dr. George W. Hubbard as the institution's first president.

The School of Graduate Studies and Research at Meharry Medical College began in 1938 as a series of short courses in the basic and clinical sciences. In 1947, a Master of Science Degree program was implemented as the first graduate degree, a Ph.D. program was established in 1972, and an M.D./Ph.D. program in 1982. The Master of Science in Public Health Program at Meharry Medical College was established in 1974 and graduated its first class of one student in 1978.

Over the years, Meharry has maintained its reputation as a leading educator of highly competent physicians, dentists, biomedical scientists, public health practitioners, and allied health professionals. Meharry Medical College today is the largest private, historically black institution in the United States dedicated exclusively to educating health care professionals and biomedical scientists. The College serves approximately 780 students each year in its Schools of Dentistry, Graduate Studies and Research, and Medicine. It has remained independent and is accredited by the Southern Association of Colleges and Schools. The College continues its relationship with what is now the United Methodist Church and receives approval by the Church's University Senate and funding from its Black College Fund.

## **College Motto**

Worship of God through Service to Mankind.

## **Mission Statement**

Meharry Medical College is an academic health center that exists to improve the health and health care of minority and underserved communities by offering excellent education and training programs in the health sciences. True to its heritage, Meharry places special emphasis on providing opportunities for people of color, individuals from disadvantaged backgrounds, and others regardless of race or ethnicity; delivering high quality health services; and conducting research that fosters the elimination of health disparities.

## Vision Statement

The leadership at Meharry Medical College is committed to enhancing our national reputation and expanding our global reach as a quality-driven academic health center noted for its:

- Leadership in diversifying the nation's health professions work force;
- Highly effective and innovative educational and training programs;
- Enlightened health policy development and culturally sensitive evidence-based health services; and
- Preeminence in focused research that leads to the elimination of health disparities.

## Core Values

The Board of Trustees, faculty, and staff of Meharry Medical College are committed to and governed by the following core values:

- **Excellence:** consistently achieving outstanding levels of performance while upholding the highest standards of ethical behavior, intellectual honesty, and professional conduct.
- **Service:** maintaining a nurturing and service-oriented environment that exceeds expectations and treats all people with compassion, dignity, and respect.
- **Accountability:** accepting individual and collective responsibility for preserving and effectively managing the resources of the College.
- **Teamwork:** encouraging, supporting and valuing the collaborative efforts of faculty, staff, and students to advance the quality of education, research, and patient care.
- **Innovation:** promoting creativity and the development of ideas that stimulate improvements in our intellectual and operational endeavors.
- **Diversity:** fostering ethnic, intellectual, social, and cultural diversity.
- **Community-focused:** demonstrating our concern for the health care needs of underserved communities and advocating for local, state, and national health and public policies directed at improving the status of health of all individuals.

## Strategic Priorities

The College has adopted seven major initiatives that provide pathways toward fulfilling the mission and vision for the institution. These priorities drive institutional direction, investment of resources, and benchmarks for institutional effectiveness.

- **Educational Excellence:** providing an enriching environment that assures and sustains academic excellence and professional competency in all academic programs.
- **Faculty Recruitment, Retention, and Development:** attracting and sustaining a cadre of committed and productive faculty who exemplify the highest standards of personal ethics and professional excellence.
- **Clinical Excellence:** diversifying and expanding the clinical enterprise by maintaining a primary care focus and targeting selected specialty areas that meet the community's needs.
- **Research Excellence:** capitalizing on research strengths and elevating the competitive quality and quantity of basic, clinical, translation, and community service research to reduce health disparities.
- **Operational Excellence:** strengthening the organizational structure, processes, and culture to ensure the highest standards of performance, responsiveness, and accountability.
- **Facilities, Infrastructure and Environmental Excellence:** augmenting facilities to demonstrate long term commitment to providing an efficient, safe, and user friendly environment that enhances teaching, learning, research, and service delivery.

- **Financial Performance:** projecting the College on a path of financial health that adequately supports the organization's aspirations through effective management of resources and stewardship that ensures financial stability and growth.

## **Campus Facilities**

The Meharry Medical College campus is located in north Nashville. The campus is comprised of 19 buildings, an outdoor amphitheater, two parking garages, and several surface parking lots. The College also owns an off campus apartment complex. Following are brief descriptions of campus buildings and facilities.

### **The S.S. Kresge Learning Resources Center**

The S.S. Kresge Learning Resources Center is named in honor of the founder of the Kresge Stores and the S.S. Kresge Foundation, which has supported educational initiatives since 1924. The "LRC," as it is known, houses the Meharry Medical College Library and College administrative offices. The offices of the President, Senior Vice President for Institutional Advancement, Senior Vice President for Finance, Senior Vice President for Legal Affairs and Corporate Secretary, Marketing and Communication and the Meharry National Alumni Association are located on the upper floors of the building. The ground floor of the building houses the Pamela C. Williams, M.D., Medical Simulation Center and Clinical Skills Center. The center includes 10 exam rooms, surgery, maternity, trauma, and ICU rooms, and Harvey SIM rooms for medical student training and testing.

### **The Meharry Medical College Library (MMCL)**

The Meharry Medical College Library occupies three floors of the S.S. Kresge Learning Resource Center. The Library provides online access to an extensive digital collection of electronic journals and e-books. The library print collection includes hard copy journals and books. The MMC Library includes classrooms with networked computers to promote interactive teaching and learning, a computer laboratory for student and faculty use, and wireless access throughout all three floors for patrons who prefer to use their own computers. The Meharry Archives is housed in the library. The editorial staff of the Journal for Health Care for the Poor and Underserved and the Office of Faculty Affairs are located in the Library.

### **The Harold D. West Basic Sciences Building**

Named in honor of Meharry's first African American president, the West Basic Sciences Building houses the primary basic science classrooms and teaching laboratories for first- and second-year students. The building also houses the School of Medicine's Academic Computing Center, bench research laboratories, core facilities and the animal care facility. The administrative offices of the School of Medicine and the School of Graduate Studies and Research are housed within this facility. The building features a four-story Atrium, which is the site of many campus events as well as informal gatherings of students between classes. It also houses a two-story auditorium, known as M001, with a seating capacity of approximately 500. The Matthews Meharry Bookstore is located on the first floor. Several study rooms also are available for individual and small-group sessions.

### **The School of Dentistry Building**

Built in 1979, the School of Dentistry (SOD) Building has seen several facility upgrades in recent years. It houses classrooms, small meeting rooms, student lounges, labs, clinics, and the administrative offices of the Dean and faculty of the School of Dentistry. The highlight of the SOD Building is the Iris B. and Wendell E. Cox, D.D.S., Auditorium, named in honor of the Meharry alumnus and his wife who provided funding for its renovation and multimedia technology

upgrades. Their gift of \$1.5 million represents the largest single amount contributed by an alumnus in the College's history. In 2003, two dental technique instructional labs were outfitted with state-of-the-art multimedia technology so that students have their own computerized workstation while in the lab. Dispensing and sterilization facilities are positioned for easy access by students. The recent renovations include a new imaging laboratory and a study area with carrels. A new Dental Simulation Lab is housed on the fourth floor of the building. This computerized lab includes 40 simulation units, a faculty monitoring center, and offices. A \$750,000 donation from the Delta Dental Corporation was used to fund the Dental Simulation Lab.

### **The Daniel T. Rolfe Student Center**

The Daniel T. Rolfe Student Center accommodates offices for Meharry's student government organization, the Pre-Alumni Association, other student organizations, and the *Meharrian* yearbook. It also houses the Office of Pastoral Care Services, a chapel, the Anna Cherrie Epps Center for Educational Development and Support (CEDS), and a computer lab. CEDS provides a variety of academic support services for students and professional development activities for faculty. The Rolfe Center also features a large seminar room and smaller meeting and study rooms for student use.

### **New Alumni Hall**

New Alumni Hall is the first new building on Meharry's campus since 1978. The grand opening for New Alumni Hall was May 10, 2012. The building consists of approximately 6,000 square feet and is used for seminars, receptions, meetings, and community gatherings. It also includes meeting space that will seat 300 to 500 people. This structure pays homage to Meharry's alumni for their dedication to the College's mission of serving the underserved and underrepresented,

### **Clay E. Simpson Jr. Building**

The Clay E. Simpson Building houses the Robert Wood Johnson Center for Health Policy at Meharry Medical College and the Masters of Science in Public Health program offices. The Robert Wood Johnson Center for Health Policy was established in 2009. The Center is a collaborative effort with the Vanderbilt University School of Arts and Sciences. The Center aims to serve as a think tank for pressing health care issues of the day, increase the diversity of health policy scholars with Ph.D.s who are formally trained in sociology and economics, and provide Meharry's students and faculty with new curricula, research, and academic offerings in health policy. The Center awards a certificate in health policy to Meharry and Vanderbilt students who complete the academic program. The Center will re-shape the future of America's health policies by creating a more inclusive pool of experts trained in health policy and allied disciplines. The Masters of Science in Public Health program occupies the second floor of the Clay Simpson Building. The recently renovated building houses faculty offices, study rooms for students, and classrooms. The certificate in public health and the masters degree in public health are awarded through the School of Graduate Studies and Research.

### **The George Hubbard Hospital (Old Hospital)**

Built in 1931, the George Hubbard Hospital is annexed by the Dental School on the north and the Comprehensive Health building on the south. This building is now a multi-use facility housing the offices and departments of Pediatrics, Family Medicine, Internal Medicine, Obstetrics/Gynecology, Surgery, Psychiatry/Neurology, some clinical research including Sickle Cell Research and the Nashville General Hospital Clinics. The east and west wings of the fifth floor house the Women's Health Research Center and the Center for AIDS Health Disparities Research labs and offices.

### **The Meharry Clinic (Comprehensive Health)**

This multi-use building, which was added in 1972, is an annex to the Nashville General Hospital building and the Old Hospital. This building is shared by Family and Preventive Medicine; Ophthalmology; Dermatology; Children, Youth and Pediatrics; Orthopedics; Veterans Administration Clinics, Student and Employee Health Services; Fetal Medicine; Women's Health, and Student Counseling Center.

### **Lloyd C. Elam Mental Health Center**

The primary services within this building include the provision of mental health and associated services for children, adolescents, adults, and the elderly. In-patient services are located on the first floor and clinical services for outpatients are available on the second floor of the building. The northeast annex of this building houses the Ross Fitness Center, which includes basketball and racquetball courts, an aerobics exercise room, and a weight room.

### **Hulda Lyttle Hall**

Lyttle Hall was constructed in 1934 and is on the registry of the Tennessee Historical Society. This building originally housed the Meharry Medical College School of Nursing, which closed in 1962. Currently vacant, a major restoration and renovation project was launched in 2011.

### **OIT Building**

The Office of Information and Technology (OIT) building is the hub of the campus computer network systems. In addition to the technical support center, there are classrooms for computer and network systems training.

### **Dorothy Brown Hall**

This is a coed residential building. The building has 55 suites and laundry facilities for its residents.

### **The Royal Towers (Formerly Meharry Student Towers)**

Royal Towers is a ten-story residential complex containing 156 one and two bedroom apartments for students and faculty.

### **Henry A. Moses Building**

The Meharry Human Resources Department, Office of Student Services and Enrollment Management, and Office of Internal Audit occupy the two-story Henry Moses Building.

### **Biomedical Science Building**

The Biomedical Science Building houses the Meharry-Vanderbilt Alliance as well as research laboratories for neuroscience and molecular neurobiology investigators.

### **Power Plant**

The Power Plant Building is the operations center for the Campus Operations Department and the Campus Central Plant for major heating and air conditioning equipment.

### **Security Triplex**

The Department of Campus Security and Safety is housed in this building.

### **Nashville General Hospital at Meharry**

Nashville General Hospital at Meharry is the principle site for clinical training. The hospital represents a unique public-private alliance involving Meharry, Vanderbilt University Medical Center, and the Metropolitan Nashville Hospital Authority. This facility was formerly Hubbard Hospital; it was renamed in 1994 when the government of Metropolitan Nashville and Davidson County moved its public hospital to Meharry's campus. Here, under the direction of Meharry faculty, students and residents encounter a broad range of medical-surgical experiences. Equipped with 125-staffed beds, the hospital is accredited by the Joint Commission on Accreditation for Healthcare Organizations (JCAHO). The hospital features a technologically advanced Breast Health Center, cardiac catheterization lab, emergency department, medical imaging and numerous clinics.

### **Meharry Practice Sites**

The Meharry Clinics adjoin Nashville General Hospital and provide primary and specialty patient care. The Meharry Medical Arts Center is located at 1919 Charlotte Avenue in Nashville. The Medical Arts Center offers sub-specialty care through the Meharry Center for Women's Health and the Meharry Medical/Surgical Sub-Specialty Group. Meharry also provides patient care at the Meharry Family Medicine Clinic in Madison, Tenn.

### **Affiliated Clinical Facilities**

The College also has formal ties with other off-campus health care providers to expand the hands-on experiences available for students and residents. The professional contacts with patients at those sites enrich the quality of training while providing exemplary comprehensive health care. Among these are Vanderbilt University Medical Center, Middle Tennessee Mental Health Institute, Middle Tennessee Medical Center, Alvin C. York Veterans Administration Medical Center in Murfreesboro, Tennessee, and Blanchfield Army Community Hospital at Fort Campbell, Kentucky.

## Administration and Organization

## Board of Trustees

Mr. Milton H. Jones, Jr., Chairman  
Mr. Aubrey Harwell, Jr., Vice Chairman  
Dr. Wayne J. Riley, President and CEO  
Benjamin Rawlins, Esq., Corporate Secretary

Dr. Nelson L. Adams, III  
Dr. Adepapo Ajayi  
Mr. Richard Benson  
Dr. Brandon Barton, Jr.  
Dr. T. B. Boyd, III  
Dr. Kim Cape  
Mrs. M. Inez Crutchfield  
Mr. H. James Dallas  
Dr. Fernando Daniels  
Dr. Robert M. Daugherty, Jr.  
Mr. Richard R. Davis  
Dr. Charae Dixon  
Mr. Eddie D. Evans  
Dr. Daphne Ferguson-Young  
Dr. Eric A. Floyd  
Mr. Derric A. Gregory, Sr.  
Dr. Velma Hunter Jackson  
Dr. Martin D. Jeffries  
Dr. Norman Jones  
Dr. Shedrick D. Jones  
Dr. Jonathan B. Perlin  
Honorable Mary Pruitt  
Mr. Edgar G. Rios  
Dr. Frank S. Royal, Sr.  
Dr. Jeanette South-Paul  
Dr. Neal A. Vanselow  
Ms. Carol H. Williams-Hood  
Mr. James E. Williams  
Mr. Lorenzo Williams  
Dr. Robert L. Williams, Jr.

## Emeritus Members

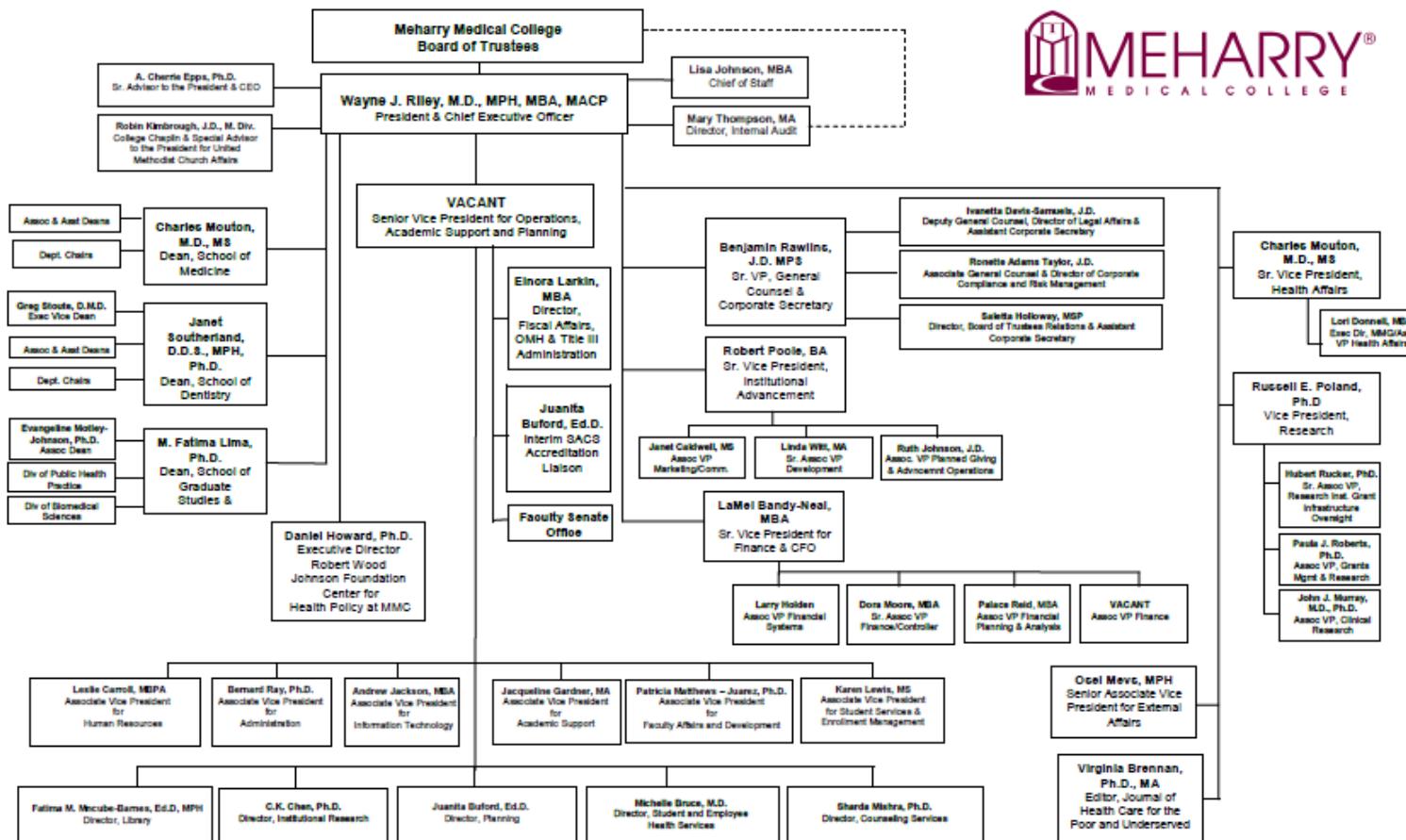
Rabbi Randall Falk Dr. Edward W. Reed

## Senior Administrative Staff

Wayne J. Riley, M.D., M.P.H., M.B.A., MACP  
President and Chief Executive Officer

LaMel Bandy-Neal, M.B.A Sr. Vice President for Finance and Treasurer	Robert S. Poole, M.S. Sr. Vice President for Institutional Advancement
Maria de Fatima Lima, Ph.D. Dean, School of Graduate Studies and Research	Benjamin E. Rawlins, J.D. Sr. Vice President, General Counsel and Corporate Secretary
Charles P. Mouton, M.D., M.S. Senior Vice President for Health Affairs and Dean, School of Medicine	Janet H. Southerland, D.D.S., Ph.D. Dean, School of Dentistry
Russell E. Poland, Ph.D. Vice President for Research	

# Meharry Medical College Organization Chart



Updated 06/2012

## Life at Meharry Medical College

Located near Nashville's historic Jefferson Street, nestled between two neighboring historically black universities, and near Nashville's thriving downtown, Meharry provides students with a full-range of auxiliary services to make their experience on campus both intellectually stimulating and socially comfortable and enjoyable.

### Metropolitan Nashville and Davidson County

Nashville was settled in 1779 and became the state capital in 1843. Nashville and Davidson County are governed by a combined metropolitan government that provides municipal services for the county's population of 626,681. Nashville typically enjoys a mild and pleasant climate with very hot or very cold conditions occurring only a few days of the year. The city has two nicknames: "Music City USA," for the city's musical heritage, and the "Athens of the South," for the city's dedication to fine arts and numerous institutions of higher education.

Nashville is ranked among the top 10 best U.S. cities for African Americans by *Black Enterprise* magazine; one of the best U.S. cities for work and family by *Kiplinger* magazine; and the nation's friendliest city by *Travel and Leisure* magazine. According to the Nashville Convention and Visitors Bureau, Nashville consistently ranks among the lowest for cost-of-living rates in comparable cities across the nation. Costs for groceries, housing and utilities are typically below the national average.

The city's leisure and nightlife are remarkable, filled with great dining, sports, shopping, music and theater. Known for its country music worldwide, Nashville also offers, on any given night, fantastic jazz, R&B, rock, Americana, hip-hop, and virtually any music imaginable. The Nashville Symphony is nationally renowned. Nashville has three professional sports teams – the NHL Nashville Predators, the NFL Tennessee Titans, and the AAA baseball Nashville Sounds. It also offers collegiate team sports (Tennessee State University, Vanderbilt, Belmont, and Lipscomb universities) and the annual Music City marathon and half marathon. The arts scene is alive and thriving with permanent and traveling exhibitions at the Frist Center for the Visual Arts; the Aaron Douglas and Carl Van Vechten Galleries at Fisk University; and the Cheekwood Botanical Garden and Museum of Art. The Parthenon Museum is housed at the world's only full-scale replica of the famed Greek temple. History buffs will enjoy The Hermitage, home of the seventh U.S. president, Andrew Jackson; and scores of preserved homes that are open year-round for tours.

### Student Housing

Housing at Meharry Medical College is managed by Meharry Properties. Students interested in campus housing should write to: Manager of Meharry Properties, 944 21st Ave. N., Nashville, TN 37208-3599, or call (615) 320-5791. Applications for housing will be mailed to students upon written request. Returning residents of College housing are permitted to renew their lease. Incoming students will receive priority for the remaining available housing.

**Dorothy Brown Hall**, located on Albion Street, is a coed facility. The building contains 55 suites and laundry facilities. Each air-conditioned suite is furnished with a bed, a desk and chair, an armchair, and a bookcase. The monthly rental rate in the dormitory varies based on the size of the suite. Students should bring linen, blankets, and other items they wish to add to the furnishings. A security deposit is required.

**Royal Towers at Meharry Medical College**, located on 21st Avenue North, is a 10-story residential complex, which opened in September 1971 was fully renovated in 2001. It contains 156 one- and two-bedroom apartments for Meharry's students, staff, and faculty

members and their families. Each unit is air-conditioned, carpeted, and furnished with a stove, refrigerator, and garbage disposal. Laundry facilities are located on select floors. Rental rates vary and a security deposit is required.

**Off-Campus Housing:** The Office of Student Life maintains a list of available off-campus accommodations in the Nashville area that Meharry students have found acceptable. Many of the rental properties are close to the campus. Cost, furnishings, and conditions vary to give students several options. For best choice, students seeking off-campus housing should visit the property or contact the Office of Student Life, Meharry Medical College, 1005 Dr. D. B. Todd Jr. Blvd., Nashville, TN 37208 or call (615) 327-6792.

**Change of Address:** Students who change their mailing address after registration should record the change in Banner Student Self-Service as soon as possible. The address logged in this system is considered the official one. Any communication from the College bearing the address on file is considered as properly delivered.

## Dining

The Nashville General Hospital at Meharry cafeteria is open to Meharry faculty, students, and staff. Located on the lower level of the hospital, the cafeteria serves breakfast, lunch, and dinner daily. The menu is a la carte, with a variety of individually priced choices. A healthy, nutritious, and well-balanced menu is offered at each meal. Meals are on a pay-as-you-go system; there is no meal card or credit plan. Breakfast is served from 6:00 a.m. to 9:30 a.m.; lunch is served from 10:30 a.m. to 2:00 p.m.; and dinner is served from 5:30 to 7:00 p.m.

The Salt Wagon Café is located behind the Anna Cherrie Epps Center (CEDS) and offers gourmet coffees, specialty drinks, smoothies, sandwiches and other "grab and go" items. The Café is open to students, faculty, and staff from 7 a.m. to 7 p.m. Monday through Friday. The Café is closed Saturday and Sunday.

Snack and beverage vending machines are available in most campus buildings.

## Services to Students

### Privacy and Access to Academic Records

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

- The right to inspect and review their education records within 30 days of the day the College receives a request for access. Students should submit written requests to the College Registrar and identify the record(s) they wish to inspect. The College Registrar will arrange for access and notify the student of the time and place where the record(s) may be inspected. If the College Registrar does not maintain the record(s), the student will be directed to the College official to whom the request should be addressed.
- The right to request amendment of any part of an education record that they believe is inaccurate or misleading. Students who wish to request an amendment to their educational record should write the College 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 College 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.
- The right to consent to disclosures of personally identifiable information contained in the student's education record(s) to third parties, except in situations in which FERPA allows disclosure without the student's consent: One such situation is disclosure to school officials with legitimate educational interests. A "school official" is a person employed by the College in an administrative, supervisory, academic or research, or support staff position (including College law enforcement personnel and health staff); a person or company with whom the College has contracted; or a student assisting another College official in performing his/her tasks. A College official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

The Buckley Amendment provides the College 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. Meharry Medical College has designated the following as directory information:

- Student name
- Address
- Email address
- Telephone number
- Date and place of birth
- Major field of study
- Dates of attendance
- Classification
- Enrollment status (part or full-time)
- Degrees and awards received
- Participation in officially recognized activities and sports.

Any new entering or currently enrolled student who does not wish disclosure of directory information should notify the College Registrar in writing. No element of directory information as defined above is released to students who request nondisclosure except in situations allowed by

law. The request to withhold directory information will remain in effect as long as the student continues to be enrolled or until the student files a written request with the College Registrar to discontinue the withholding. To continue nondisclosure of directory information after a student ceases to be enrolled, a written request for continuance must be filed with the College Registrar during the student's last term of attendance.

If a student believes the College has failed to comply with the Buckley Amendment, he or she may file a written complaint with the Associate Vice President of Student Services and Enrollment Management. Questions about the application of the provision of the Family Educational Rights and Privacy Act should be directed to the College Registrar or to the Office of the General Counsel.

## **Meharry Student Directory Listings**

Students are listed in the online directory that is published in the Blackboard Learning System. Students who want their listing included in the online directory have the authority to update their personal information (including name, address, e-mail, phone, cell phone, etc.) and select how much of this information is made available to the College. This directory is produced by Academic Computing.

## **Meharry Medical College Library**

The Meharry Medical College Library (MMCL) supports patient care, research, and learning by providing access to current and relevant information resources in a recently renovated state-of-the-art facility that effectively integrate technology with highly skilled staff to promote best practices.

The core priorities for the Meharry Medical Library are:

- **Information:** providing health and life sciences information that advances research, scholarship, education, and patient-care;
- **Education:** developing and implementing programs to train and educate faculty, staff, and students in the skills needed to effectively find, evaluate, and manage health and life sciences information;
- **Communication:** partnering with patrons, being familiar with their needs, and providing and promoting resources and services that meet those needs; and.
- **Technology:** Cutting edge videoconferencing equipment is available. An open Computer Lab has 16 computer workstations. The Electronic Classroom is used primarily for group training and is equipped with 20 computer workstations. *Smart Boards* are in the Computer lab and e-Classroom to enhance teaching and learning. A *Plasma Screen* in one of the Group Study Rooms allows students to project their laptop screen for group discussions. Eight additional group rooms are on the top floor of the library. The *Book-Eye Scanner* in the Archives Department facilitates the digitization of all yearbooks, academic catalogs, newsletters, and photo archives for preservation. All *Meharrian Yearbooks* are currently accessible online.

Library Facts at a Glance:

- The MMCL is increasingly focusing its collection on electronic resources to maximize the utility and accessibility of information across the campus and from home. The MMCL makes more than 4,165 electronic journals, 1,264 e-books, 243 databases, and 1,093 web resources available to patrons.
- The Meharry Medical College Archives department embodies a vast collection of historic photographs, Yearbooks Catalogues, and Newsletters dating back to the late 19<sup>th</sup> century. Processing, digitizing, and preserving some of the archival collection has made it

easier for the Archives department to share the information with organizations, researchers as well as patrons. Archives may be accessed at the following website: (<http://site.ebrary.com/lib/mmc/search.action?p00=meharrian&search=Search+ebrary>).

- Through the HBCU collaborative partnership, The Meharry Archives department selected 50 images of the Schools of Medicine, Dentistry, Nursing, and Pharmacy to expose the collection with other HBCU institutions. This project has increased opportunities for research using Meharry's unique collection, broadened knowledge of Meharry's history and mission, and further provided evidence of the impact of Meharry's history of African-American healthcare. The photos may be viewed at <http://contentdm.auctr.edu/cdm/search/collection/mhmc>.
- **Document Delivery:** Library users may obtain desired materials not held by the library through this service. Electronic Document Delivery requests can be emailed to the [interlibraryloan@mmc.edu](mailto:interlibraryloan@mmc.edu). Occasionally, charges may be incurred when using this service.
- **Available Software in the Computer Laboratory and Electronic Classroom:** A computer lab is located on the second floor of the library and an Electronic Classroom is located on the third floor. The workstations operate in a Microsoft platform and provide access to the Meharry intranet and to the internet. Software applications include standard office software; statistical packages (SPSS, STATA, and SAS); multimedia and citation management applications (Endnote, and RefWorks).

**Eskind Biomedical Library at Vanderbilt:** Meharry students have access to the Eskind Biomedical Library (EBL) at the Vanderbilt University Medical Center through the auspices of the Meharry-Vanderbilt Alliance, a collaboration between the two schools to enhance education, patient care, and research.

**Library Practices and Fees:** Incoming students are required to make a one-time \$20.00 deposit to cover losses, mutilation, and non-receipt of borrowed materials during their course of study at Meharry. Additionally, all students are assessed a yearly library fee, which helps to maintain the library. Books may be checked out for 28 days; audiovisuals for five days; and reserve materials for 24 hours. Print journals are available for in-library use only.

Library users are expected to maintain a courteous study environment. To avoid unnecessary distractions we ask users to answer cell phone calls from the lobby outside of the library. Students are allowed to bring bottled water into the library. However, snacks are restricted to the "Study While You Eat Area" located on the second floor of the library.

## Academic Counseling

The Anna Cherrie Epps Center for Educational Development and Support (CEDS) is a comprehensive academic support unit that was established to foster an environment that stimulates and nurtures excellence in learning and teaching in the three schools: Medicine, Dentistry and Graduate Studies and Research. The Center is organized into two functional areas: (1) Academic support services for students and (2) Faculty development and support.

CEDS is centrally located on the Meharry campus in the Rolfe Student Center Building. The upper level offers five spacious group study rooms and a classroom with a seating capacity for 35. To allow students to relax between studying, a break area is equipped with vending machines. The lower level offers a computer lab for computer based learning, one room for group instruction, and five independent study rooms. Three Education Skills Specialist are on duty to work with students by assessing their academic profiles and developing a learning plan appropriate to each student's needs. The staff works together to ensure that a student's

academic learning needs are met. CEDS study areas are available to students from 7 a.m. to 1 a.m. daily. For more information about the services provided by the Center for Educational Development and Support, call 615-327-6500.

## **Counseling Services**

Meharry Medical College provides counseling services for students and residents at the campus Counseling Center on the third floor of the Old Hospital. The center is committed to a highly effective counseling support system that complements the educational and human enrichment endeavors of the institution. Counseling services include individual, family, and group therapies as well as academic counseling and career development advisement.

Workshops related to stress reduction; time management and a variety of clinical presentations are regular features of the center. Moreover, psychologists and counselors at the center assist in making provisions for special academic and test accommodations for students with disability needs. This includes psychological testing, neuropsychological evaluation, and psycho-educational assessment.

The services of the Counseling Center are broad-based and encompass services to partners and dependents of students and residents, as well as courtesy consultations to faculty and staff. Appointments can be made by visiting the Counseling Center at Suite #325 of the Old Hospital, or by calling (615) 327-6915 or 327-6156. All counseling services and records are confidential as mandated by professional ethics codes and by law. Counseling records do not become a part of academic records. There are no fees for services.

## **Student Health Services**

The Student Health Center is located in Suite 331, Meharry Comprehensive Health Building. The Student Health Center is open Monday-Friday, 8 a.m. to 5 p.m. No appointment is necessary; however, to better accommodate students' busy schedules, appointments are encouraged. Same-day appointments are available. The telephone number is (615)327-5757.

The Student Health fee provides all current Meharry students access to the services provided at the Student Health Center. The clinical staff of Student Health Services is comprised of a certified family nurse practitioner and clinical faculty from the Department of Internal Medicine. The services provided include acute illness and injury management, physical examinations\*, laboratory services\*, immunizations\*, tuberculosis screening, and N95 respirator fit testing.

Services provided in the Student Health Center are not intended to be used in the place of a primary care physician or a specialist. For life or limb-threatening conditions, students should go directly to the nearest emergency department.

If students require emergency treatment after normal operating hours, they are encouraged to go to the Nashville General Hospital at Meharry Emergency Department, an area emergency department, or call 911.

*\*Services are billed to the student's health insurance and subject to co-pays and deductibles.*

**Mandatory Immunizations: All students are required to submit immunization records for the following:**

- **Hepatitis B Series:** documentation of having received 3 separate doses and quantitative serological evidence of immunity.
- **MMR** (measles, mumps, rubella): documentation of having received 2 separate doses and quantitative serological evidence of immunity.

- **Varicella:** documentation of having received 2 separate doses of the vaccine or documentation of having had the disease confirmed by your healthcare provider, and quantitative serological evidence of immunity.
- **PPD** (Tuberculosis Skin Test): documentation of having received the test within the last 12 months or results of Chest X-ray and subsequent INH Therapy documentation if PPD was positive.
- **Tetanus/Diphtheria/Acellular Pertussis** (TdAP): documentation of having received the immunization within the last 10 years.
- **Polio**

## Student Health Insurance

Meharry Medical College sponsors a group student health insurance plan. All students must have health insurance. Waiver of participation may be granted if the student presents proof of coverage, which is equal to or better than the Meharry Insurance Plan. The student may elect to waive coverage if covered by a parent's or spouse's insurance plan; however, independent plans with high deductibles do not provide comparable coverage. The waiver process must be completed online. The group health insurance plan is designed to defray a major portion of the cost of hospitalization and covers the student when on or off campus.

The plan covers students for one academic year at Meharry Medical College from July 1 to June 30. Insurance coverage must be renewed each year. Below are the 2012-2013 annual premium rates for the bundled health insurance package. One-half of the annual premium is billed each semester.

Coverage Levels	Annual Premium – 7/01/12 – 6/30/13
Student Only	\$3,240.00
Student and Child(ren)	\$6,570.00
Student and Spouse	\$6,460.00
Family	\$9,800.00

Medical and Vision Insurance Provider: Aetna Student Health (866) 746-2820  
 Dental Provider: Delta Dental of Tennessee (800) 223-3104

For more information about the Meharry Medical College group student health insurance plan, please visit <https://www.hrconnection.com> and enter User ID "Meharry" and enter the password, "Students1". You can also contact Student Services & Enrollment Management at (615) 327-6223.

## Foreign Student Services

The Office of Student Services and Enrollment Management coordinate and support the processing of foreign or international student Visa (F-1) for admission to Meharry Medical College. The office serves as a central resource and point of first contact for all new international students seeking approval for employment -- Curricular Practical Training (CPT) and Optional Practical Training (OPT). For additional information, contact the Office of Student Services and Enrollment Management at (615) 327-6084.

## **Students with Disabilities**

Meharry Medical College is committed to the provisions of the Rehabilitation Act of 1973 and Americans with Disabilities Act in creating an inclusive community for students with disabilities. Students seeking accommodations for any type of disability are encouraged to contact the Office of Student Affairs in their respective school. Services include, but are not limited to, extended time for testing, assistance with locating sign language interpreters, audiotaped textbooks, physical adaptations, note-takers, and reading services. Accommodations are tailored to meet the needs of each student with a documented disability. Specific concerns pertaining to services for people with disabilities or any disability issue should be directed to the Office of General Counsel.

## **Veteran Students**

Students receiving veteran's educational benefits must maintain satisfactory academic progress (SAP) as defined by their specific school. Students who fail to maintain SAP are ineligible for veteran's educational benefits. Students who are eligible to receive veteran's educational benefits must be certified by the Office of Records.

## **Meharry Bookstore**

Matthews Meharry Medical Bookstore is located in the West Basic Sciences Building. The bookstore is open Monday through Friday from 9 a.m. to 5 p.m. and is also available online through the Meharry website or at [www.meharrybooks.com](http://www.meharrybooks.com). In addition to required textbooks, the Bookstore carries a wide selection of reference and general reading books, Meharry clothing and gift items, and an extensive line of medical equipment. Bookstore staff members are available to assist with special orders as needed.

## **Meharry Copy Center**

The Meharry Copy Center, located on the basement level of the School of Dentistry Building, provides full-service printing, copying and finishing services. The Copy Center is staffed and operated by Dex Imaging and is open Monday through Friday from 7 a.m. to 8 p.m. Students may use this resource for low-cost black and white printing, full color printing, and a variety of finishing and binding options. Payment for copying services may be rendered in cash, check, or credit card. Please contact the Copy Center at (615) 327-6278 for more details.

## **Mail Services**

Mail Services, located on the basement level of the School of Dentistry Building, provides campus post office boxes for residents of Dorothy Brown Hall and for approved student groups. These boxes may be used to facilitate United States Postal Services (USPS) mail delivery as well as receipt of packages shipped via UPS and FedEx. Mail Services is open Monday through Friday, 8 a.m. through 4 p.m., and window services hours are 12 p.m. through 4 p.m. Monday through Friday.

## **Campus Safety and Security**

The Department of Campus Safety and Security (DCSS) is located in the Triplex Building on 21<sup>st</sup> Avenue N., near the Henry Moses Building. The Office is committed to providing an efficient, aesthetically pleasing, safe, and user-friendly environment that promotes teaching, learning, and service delivery.

The DCSS is open 24 hours a day, seven days a week, to respond to emergencies and/or reports of criminal activities and to provide security to the campus. The telephone number, 615 327-6666

is used to report any emergency. The staff addresses the patrolling, crime prevention, escort services, traffic/parking, investigative and administrative needs of the college community.

The DCSS reports directly to the Associate Vice President for Administration. The Department operates three shifts. Members of the staff have prior police/security experience and/or military backgrounds. In addition, the officers attend monthly and annual in-service training to gain additional skills. Prior to employment, officers are required to complete testing for state certification as security officers.

Security officers have the authority to detain individuals until Metro Nashville Police officers arrive on the premises. The campus community is encouraged to report all campus crimes to the DCSS immediately. Security officers conduct preliminary investigations of all reported situations and refer them to the appropriate law enforcement agency when necessary or mandated by law. An excellent working relationship exists between DCSS and the local, state, and federal law enforcement agencies. The DCSS meets monthly with the security offices of other universities in the Nashville area. All violations of state and federal criminal law that come to the attention of the DCSS are reported immediately to the appropriate law enforcement agency for investigation and disposition.

**Emergencies:** The Meharry Medical College Department of Campus Safety and Security is a professional organization dedicated to the protection and security of Meharry Medical College and its diverse community, committed to providing a safe, secure and accessible campus for students, faculty, staff, patients and visitors. Campus Safety and Security Officers are on duty 24 hours a day, seven days a week and should be contacted immediately if suspicious or potentially dangerous situations occur.

**To contact a security officer, please call:**

Emergency On campus, dial 6666 or (615) 327-6666  
Non-emergency On campus, dial 6254 or (615) 327-6254

**To contact Metropolitan-Nashville Police, please call:**

Emergency: 911  
Non-Emergency: 615-862-8600

**Student Identification Badge:** All students are required to wear a photo Proximity/ID badge while on-campus. Proximity/ID badges are issued during the freshman year and remain active through graduation. If lost during the school year, badges can be replaced; however, a fee is charged. Students must first receive a signed ID replacement form from the Department of Campus Security, pay the fee in the Treasurer's Office or at the Security Office, and pick up a reprinted badge. If a new photo needs to be taken, students must schedule an appointment with the Department of Campus Security by phoning (615) 327-6254.

**Annual Security Report ("Clery" Report).** The Chief and Director of Campus Safety in cooperation with the Legal Affairs Office prepares the Meharry Medical College's annual report to comply with the Jeanne Clery Disclosure of Campus Security Policy and Crime Statistics Act. The full text of this report can be located on the MMC Web site at <http://www.mmc.edu>. Additionally, a copy is available for reviewing at all Security Posts on campus (the lobby of West Basic Science Building; lobby of the Stanley S. Kresge Learning Center; lobby of the Dental School). The report is prepared in cooperation with the local law enforcement agencies surrounding our campus, Residential Managers, College Legal Counsel, Deans of each school and the Disciplinary Committee. Annually, the Associate Vice President for Administration sends a letter to all non-security/police "Campus Security Authorities" informing them of their responsibility to report crimes to the DCSS and/or the local police and asking for information on any crimes not reported. Each entity provides updated information on their educational efforts and programs to comply with the Act.

## ***Parking and Vehicle Registration Policy***

The following regulations apply to all visitors, students, faculty, staff and others who operate motor vehicles on the campus of Meharry Medical College. We solicit your cooperation in adhering to these regulations for the orderly movement of traffic, parking convenience, and safety of the entire college community.

### **A. Registration of Vehicles**

(1) Any motor vehicle operated on campus by faculty, staff, or students must be registered and display a registration decal obtained from the Department of Campus Safety and Security. Visitors must obtain a "visitor" temporary parking permit from the Department of Campus Safety and Security. Construction personnel are allowed to park their company vehicle in the MMC designated "vendor" parking, provided the vehicle is clearly marked with the company logo or sign. Generally, unmarked personal or company vehicles are not allowed to park in "vendor" spaces unless justification has been approved by Campus Safety and Security and a "temporary" parking pass has been issued.

(2) Vehicle registration for "new hire" faculty and staff must be obtained within three days of employment. Veteran employees' vehicle registration must be completed no later than the last day of September, annually. Student vehicle registration must be completed no later than the last day of the official registration period.

(3) Expiration date on vehicle decals for students and tenants living in campus housing is August 31 of each year. Expiration date on vehicle decals for employees is September 30 each year. Employee decals are designed to "cling" to the windshield, which allows the employee to easily remove the decal and use on another registered vehicle. The Department of Campus Safety and Security reserves the right to cancel decals, if deemed necessary.

(4) Decal is to be affixed to windshield and displayed on the driver's side at the bottom left corner. In those cases where compliance with the above is not feasible, submit your reasoning to the Chief and Director of Campus Safety and Security for an approved alternative. The permit must be clearly visible through the front windshield when viewed from outside or the registrant must consult with the Security Dept. for proper placement of the permit. The responsibility of properly displaying the decal rests with the individual.

(5) Remove expired decal each year.

(6) Vehicle owners must present the following at registration of vehicle:

- a. Proof of insurance
- b. Proof of ownership (on each car to be registered)
- c. Driver's license
- d. College ID or stamped registration for students.

(7) No student or employee will be allowed to register another person's vehicle.

(8) Report ownership changes; mutilated or defaced decals are to be turned into the Department of Campus Safety and Security.

(9) Changes in registration fees will be announced at the beginning of each academic year for students, and prior to the end of the official registration period for employees.

## **B. Decal Replacement Fee or Second Decal**

(1) The student parking rate covers one vehicle/one parking space. Students are issued a less expensive decal and may purchase a 2nd at a minimal fee. However, the initial decal must be returned to the Security administrative office before a replacement will be issued. Lost or stolen student decals can be replaced in two ways:

a. The student may elect to purchase a new decal by paying the full (prorated) cost to cover parking each day for the remainder of the registration period (thru August 31).

b. The student may elect to receive a "temporary parking pass" to cover the remainder of the parking cycle (through August 31). The "pass" is required to be displayed on the left side of the dashboard while parked on campus. There will be no extra charge for the "pass"; however, the normal "annual fees" would remain in force.

(2) Only one "clinging" vehicle decal will be issued to an employee. Lost or stolen employee decals can be replaced in two ways:

a. The employee may elect to purchase a new decal by paying the prorated cost to cover parking each day for the remainder of the registration period (thru September 30). Additionally, the employee would be required to continue paying the original "per pay period" fee, **OR**

b. The employee may elect to receive a "temporary parking pass" to cover the remainder of the parking cycle (thru September 30). The "pass" would be required to be displayed on the left side of the dashboard while parked on campus. Each of the employee's registered vehicles would be listed on the "pass". There will be no extra charge for the "pass"; however, the normal "per pay period" fees would remain in force.

(3) Employees or residents that fail to move the "clinging" decal from one registered vehicle to another must stop by the Security office and obtain a temporary parking pass before proceeding to the assigned area. Patrol Officers rely on this method to determine who belongs and who does not. Failure to comply with this policy will result in ticketing and towing.

(4) Persons wishing to cancel parking assignments may do so by completing the appropriate form and the Security Department will process the request. The student or employee will be required to remove the parking decal from his/her windshield and return it to the Department of Campus Safety and Security.

(5) Reimbursement may be requested of persons on extended leave. Upon request for reimbursement, please remove the decal and return it to the Department of Campus Safety and Security.

## **C. General Regulations**

(1) All local and state rules and regulations, directional signs and signals governing the use of motor vehicles shall be observed at all times.

(2) The speed limit on campus is 15mph, unless otherwise posted.

(3) All vehicles must come to a complete stop at intersections where a stop sign is located.

- (4) Motorists must give pedestrians the right of way at designated crosswalks.
- (5) Unnecessary noise from horns and mufflers is prohibited.
- (6) Loading zones and service zones are reserved exclusively for service vehicles.
- (7) Motor vehicles must be parked within the marked spaces where provided; not on lines, straddle lines or on curbs.
- (8) Possession and display of a decal to which one is not entitled is a violation.
- (9) Transferring a decal from one car to another is authorized by employees, provided the vehicle is registered with Campus Safety and Security. Students and
- (10) Only registrants of vehicles will be responsible for violations pertaining to the car, regardless of who is operating it, and for removing the decal when the vehicle is sold or otherwise disposed of or transferred.
- (11) Immobilized vehicles will not be left on the campus beyond seven days. Vehicles left on campus beyond the established time will be towed away at owner's expense.
- (12) Backing into parking spaces with signage mounted on a pole is prohibited.
- (13) Any vehicle in violation of the college parking regulations is subject to ticketing and towing. The DCSS will immediately ticket and tow unauthorized vehicles from handicapped spaces and fire lanes. If towed, a vehicle can be located by contacting the Department of Campus Safety and Security at 615 327-6254, and can be reclaimed after the towing cost has been paid. A vehicle cannot be towed without receiving a ticket; thus, a ticket fee is associated with each tow. The ticket fee must be addressed within five business days if appealed and paid within 14 business days to avoid additional fees. Three or more violations in a 12-month period may result in a vehicle being towed from campus.
- (14) **The boot policy is currently not in effect.** The MMC policy to boot a vehicle occurs after three citations of a vehicle where the owner/driver cannot be identified or has been identified as a vehicle owned or driven by a person who is not a student or employee at the college. Chronic violators with a MMC decal are subject to be booted also. Each citation following also receives a boot. A large warning sticker will be placed on the driver's side window as a notice of the boot and with directions to contact the Department of Campus Safety and Security. The boot fee plus the cost of the original citation and any previous citations that are outstanding must be paid prior to the vehicle boot being removed. Towing fees are paid directly to the towing company.
- (Boot –an immobilizing device that is attached to the wheel of unregistered, unauthorized parking and chronic violations on the Meharry campus. These devices are generally used Monday through Friday, 7:30 a.m. to 5:30 p.m., except on official holidays.)**
- (15) If a person is coming on campus to pick up or service your vehicle, call the Department of Campus Safety and Security and give your name and the person or company's name that is rendering the service.

#### **D. Penalties and Fines**

- (1) The revocation of a parking permit and/or recommended disciplinary action is warranted for the following: using a permit not properly issued, transferring or allowing a permit to be transferred to another vehicle.
- (2) The Department of Campus of Safety and Security is open twenty-four hours, seven days a week for information concerning tickets and fines.
- (3) Vehicles improperly parked may be subject to ticketing and towing at any time.
- (4) Vehicles illegally parked in loading zone spaces will be ticketed and towed.
- (5) Vehicles illegally parked in reserved spaces will be ticketed and towed.
- (6) Vehicles illegally parked in fire lanes will be ticketed and towed.
- (7) Violations may be appealed to the Appeals Board within five (5) business days.
- (8) In addition to the imposition of penalties and charges hereby established, the Department of Campus Safety and Security may refer any violator of these regulations/policies to the appropriate administrative official for additional action.

#### **E. Enforcement Hours**

Parking restrictions are in effect twenty-four hours per day, seven days per week.

#### **F. Pedestrians**

- (1) Cross the street at crosswalks only.
- (2) Do not stand in the street and talk to vehicle operators.
- (3) Pedestrians have the right of way at all crosswalks.

#### **G. Traffic and Parking Violations**

Traffic violations warranting a ticket or ticket and tow include, but are not limited to:

- (1) Speeding on Campus Property
- (2) Vehicle not registered
- (3) Parked outside permitted areas
- (4) Parking in Emergency or Ambulance areas
- (5) Parked in crosswalk
- (6) Blocking driveway/access
- (7) Failure to stop at stop sign on Campus Property
- (8) Reckless driving on Campus Property
- (9) Illegal use of permit

- (10) Permit not displayed, or properly displayed
- (11) Disregarding NO PARKING sign
- (12) Parked in Fire Lane
- (13) Blocking Drive, Walkways and Doors
- (14) Unauthorized parking in Handicap Space
- (15) Unauthorized parking in Loading Zone
- (16) Parking on grass
- (17) Parking at a yellow curb
- (18) Obstructing Vehicular Traffic
- (19) Parking over or beyond curb
- (20) Parking in a space or area not clearly designated for parking
- (21) Parking in area in which permit does not apply
- (22) Parking vehicle that occupies more than one designated parking space
- (23) Parking overtime in a space with limited time permit
- (24) Back into parking spaces with signage mounted on a pole is prohibited
- (25) Double Parking

#### **H. Parking Fine Collection:**

All parking fines are due 14 days after the violation date and are payable at the Meharry Finance Office (located on the fifth floor of the LRC Building) or the Department of Campus Safety and Security (DCSS). Credit cards cannot be accepted at the DCSS Office.

Parking fines that are not paid on or before midnight on the 14<sup>th</sup> day will be overdue and the fine will be increased by 50% on the 15th day after the ticket date.

Example:      \$10.00 Original Fine  
\$ 5.00 (50% penalty of the original fine)  
\$ 15.00 Amount due after 14<sup>th</sup> day, but before the 31<sup>st</sup> day

Parking fines that are 30 days over-due will double (the original ticket fine plus 50 %) on the 31<sup>st</sup> day after the ticket date.

Example:      \$10.00 Original Fine  
\$ 5.00 (50 % penalty of the original fine)  
\$ 15.00 Amount due after 14<sup>th</sup> day, but before the 31<sup>st</sup> day  
x 2 Double on the 31st day after the ticket date  
\$ 30.00 Amount due on the 31<sup>st</sup> date from the ticket date

Parking fines issued to students that are unpaid before or on the 30th day will have a "hold" placed on their student account until the fines are paid in full. Unpaid parking fines will prevent the issuing of a new decal on the decal's expiration date. Unpaid parking

fines will restrict students from receiving grades, registering for classes, etc. Additionally, unpaid parking fines by students may result in disciplinary action if the parking rules/policies continue to be ignored after the third violation.

Any vehicle ticketed for a third violation with two outstanding tickets that have not been paid or settled, will be ticketed and towed and will not be released until the full debt has been paid or settled by the Director of Campus Safety and Security.

Fines issued to employees will be deducted from the employee's paycheck following the 31<sup>st</sup> day of the ticket date. Unpaid parking fines by employees may also result in disciplinary action if the parking rules/policies continue to be ignored after the third violation.

#### **APPEALS:**

Students, faculty or staff members cited for a parking violation are provided an opportunity to appeal the citation by submitting a written explanation (using the Parking Ticket Appeal Form (A-Online, or the hard copy version-B,) of the circumstances surrounding the issuance of the citation. All appeal forms are required to be submitted to the Appeals Board within five (5) business days following the issuance of the citation. If desired, appeal forms (B) may be obtained from the DCSS Office; the Security Desks in the lobby of the West Basic Sciences Building or the LRC Building, or the online version may be used. The appeal must contain a copy of the citation in question, if using the hard copy version.

Appeals submitted after the five (5) business day limit will not be considered (NO EXCEPTIONS). If an appeal is filed within the limit, the overdue start date of the citation will not begin until the appeal has been decided.

The Director of the DCSS will appoint a five-member board to hear or review all appeals and make a recommendation to the Director. The Director is not bound by the recommendation of the board. The board will consist of two students; one MMC staff employee, one MMC faculty member, one DCSS employee and the chairperson will be the Director of Campus Safety and Security. The board will review all parking citation appeals on the fourth Wednesday of each month (12pm in the Office of the Department of Campus Safety and Security). A decision will be reached on the merits of the submitted written appeal. The appellant is not required to be present but may elect to make a presentation during the review, before a final decision is made.

The Board will conduct weighted voting of the options considered. The option receiving the most votes will be the recommendation of the Board. The appellant will be notified by phone or the internet of the final decision. All decisions of the Board and/or the Director of the DCSS are final. The Board may consider, but is not limited to the following options:

- (1) Let the citation stand as written along with maximum fines and penalties.
- (2) Let the citation stand as written, but consider lesser penalties.
- (3) Modify the violation and issue a new citation or warning.
- (4) Retire the Citation (file the citation and will only come back up if another violation is received within a year of the ticket date)
- (5) Nullify or dismiss the citation.

The Chief and Director of the DCSS or the Board does not have the authority to waive towing fees. Towing fees will have to be negotiated or appealed at the tow company.

## **Religious Life**

The Office of the College Chaplain provides effective and comprehensive pastoral care and pastoral counseling to students, faculty, staff, and administration of the College, with a special

emphasis on service to students. The College Chaplain serves as the spiritual leader of the institution. The Chaplain's office and a small chapel are located in the Daniel T. Rolfe Student Center.

## **Student Life**

The academic year at Meharry usually begins with a get acquainted picnic on campus and often ends with a cookout and block party in the outdoor amphitheater

The Family and Friends Weekend is a time for students and their loved ones to gather on campus for two days of fun and fellowship, each year. This weekend includes a Greek Showcase and the Pre-Alumni Association Gala. The Gala is an annual formal social event where results of student leader elections are announced, including Miss Meharry and her court. In addition, awards and scholarships are presented to various student organizations, students, faculty, and staff during the Gala.

Student organizations sponsor many other social activities each year that are anticipated and appreciated by students. Both informal and formal class celebrations are common after examinations or other academic benchmarks.

Recreational activities provide a change of pace that helps keep the stress of professional school manageable. Intramural sports are an important part of the social agenda at Meharry. Co-ed softball, co-ed basketball and other recreational activities such as handball, racquetball, and more help keep life interesting and fun for Meharry students.

Recreation facilities are located in the Ross Fitness Center within the Elam Center. The fitness center provides a gymnasium that accommodates all student activities with the exception of softball. In addition, it includes an aerobics room, a weight room with machine weights, free weights, treadmills, televisions, and a racquetball court. We use other community facilities to support recreational programs such as softball.

## **Student Organizations**

With more than 40 approved student organizations, Meharry students have the opportunity to develop and participate in community involvement, social, and cultural activities. Visit <http://mmc.campusgroups.com> for an updated list of events, meetings and activities hosted by registered student organizations. There are a variety of service, social, honor, Greek letter and special interest student organizations available at Meharry, including:

- Pre-Alumni Association
- Student National Medical Association
- Student National Dental Association
- American Medical Student Association
- Ewell Neil Dental Research Society
- Graduate Student Association
- Student Hispanic Dental Association
- African Caribbean Student Association/ROOTS

Students interested in forming a new campus organization should contact the Office of Student Life at 615-327-6792.

## **Student Governance**

The Pre-Alumni Association is the student government body at Meharry. All Meharry students are members of the Pre-Alumni Association. The student body elects a president, three vice

presidents, two secretaries, treasurer, student observer to the Board of Trustees, Miss Meharry & Court, and a member-at-large from each school. This organization provides student leadership and an official communication mechanism for students' ideas and opinions concerning the college. The Pre-Alumni Association sponsors many student activities and community service projects on campus.

## **Meharry National Alumni Association**

Upon graduation, every Meharry student is invited to join the Meharry National Alumni Association, known as the MNA. Alumni retain their ties to Meharry, their respective schools and most importantly, their treasured classmates through the MNA. The MNA serves as a major fund-raiser for the College, publishes a quarterly magazine, sponsors a number of scholarships, assist alumni chapters in hosting local events, sponsors a student mentoring and advising program, fosters collegiality among alumni, recognizes alumni for outstanding achievement, provides support to alumni in a variety of ways as the need arises. The Association operates administratively through a central office located on the Meharry Medical College campus, with chartered chapters throughout the United States. Currently, there are 38 chartered chapters.

## **Office of Information Technology**

The Office of Information Technology (OIT) is located on Dr. D. B. Todd Jr. Blvd. and is between Hulda Lytle Hall and the Meharry Clinics. OIT provides a variety of services to support the instructional, research and administrative activities for Meharry Medical College students, faculty, and staff. OIT is comprised of six support teams: Academic Computing, Administrative Computing, Business Operations, Computer Operations, Support Services, and Clinical and Research Computing.

**Academic Computing.** The primary mission of Academic Computing is to help faculty and students achieve academic excellence in and out of the classroom using technology innovations.

**Administrative Computing.** The Administrative Computing team provides support for administrative applications such as Banner, Banner Self-Service, Kronos, Raiser's Edge and WebFOCUS.

**Business Operations.** Business Operations assists departments in the selection and purchase of computers, peripherals, and software.

**Computer Operations.** Computer Operations consists of five areas: Database Administration, HelpDesk, Network Services, and Telecommunications.

- **Database Administration.** The database administration role maintains the SQL and Oracle databases and controls database security.
- **Help Desk.** The Help Desk provides support to users for computer issues as well as configures and installs new computer equipment.
- **Network Services.** Servers and network upgrades are maintained by Network Services
- **Telecommunications.** Telecommunications install and maintain telephone and data networks on campus and two remote locations.

**Clinical and Research Computing.** Its primary goal is to identify, develop, and integrate technology into the healthcare environment while providing technical support for the day-to-day operations of the Meharry Medical Practice Group and the Meharry Medical College School of Dentistry. It also supports the computing needs of Meharry researchers.

**Support Services.** Support Services provides computer training, web development, and media services to the college.

**Need Assistance?** The Help Desk is open Monday – Friday from 8:30 a.m. – 5:00 p.m. The Help Desk may be reached from any campus phone by dialing HELP (4357). The off-campus contact number for the Help Desk is (615) 327-6231.

## **Career Counseling**

The Offices of Academic Affairs and Student Affairs of each school provide career counseling to students. For information, please contact these departments within your respective school.

## **The Meharry-Vanderbilt Alliance**

Established in 1999, the Meharry-Vanderbilt Alliance is a collaboration between Meharry Medical College and Vanderbilt University Medical Center. The goal of the alliance is to foster *“education and research leading to the best patient care and eliminating disparities in healthcare affecting minorities and the underserved”*

The Meharry-Vanderbilt Alliance makes enormous contributions to medical education, research, and training by developing new models of healthcare delivery to the underserved. The collaboration contributes to a more diverse education and training environment; research that reaches a broader segment of people; and proven, evidenced-based transitional methods of practice. The opportunities and the rewards continue to grow as the Alliance focuses on discovering the causes of health disparities and seeks ways to eliminate them. Simultaneously, the partnership provides a culturally diverse educational environment that will produce better clinicians and medical scientists of the future.

**The Meharry-Vanderbilt Student Alliance** is one of the strategic initiatives of the Alliance. The purpose is to engage students in a cross-cultural academic environment to enhance their educational experience. Students in the Meharry-Vanderbilt Student Alliance (MVSA) play a vital role in medical education, communication, and community outreach through several successful endeavors. MVSA students are responsible for directing programs and activities that promote collaboration between Meharry Medical College and Vanderbilt University Medical Center, as well as to promote collegiality and science among all aspects of healthcare providers.

**Learning by Connecting.** To enhance the educational experience of students and to strengthen the programs between Meharry and Vanderbilt, a pediatric clerkship exchange was developed. Students at Meharry Medical College (MMC) and Vanderbilt University Medical Center (VUMC) may participate in the exchange program during their third year of study. VUMC medical students elect to rotate to MMC for additional outpatient exposure on two-week intervals. Similarly, MMC medical students rotate to Vanderbilt for additional inpatient exposure on two-week intervals.

# Academic Services

## Overview

The academic services provided at Meharry Medical College support all three schools - Dentistry, Graduate Studies and Research, and Medicine. The Office of Admission and Recruitment coordinates recruitment activities for all schools and provides information about the admission process. Representatives from the Office of Student Services and Enrollment Management serve as ex-officio members of the Admissions Committee for each School. The Office of the Registrar maintains the academic records that pertain to each matriculated student's progress while enrolled at Meharry Medical College. This includes grades, enrollment status, and degrees awarded.

The Offices of Admission and Recruitment and the Office of the Registrar work closely with the Deans of the three Schools of Meharry Medical College, and are responsive to their needs and the needs of the students enrolled within the schools.

## Admissions Process

The Office of Admissions & Recruitment is responsible for processing all applications for the three schools. All applicants must complete the appropriate application for the respective school of interest. Application materials may be obtained online at Meharry Medical College's website under the Admissions section at [www.mmc.edu](http://www.mmc.edu). Additional information may be obtained from the following web sites for the Schools of Dentistry, Medicine, and Graduate Studies and Research:

**Dentistry:** The AADSAS (Associated American Dental Schools Application Service) application is available via the web at [www.adea.org](http://www.adea.org). The deadline for the application is December 15 prior to the year of matriculation.

**Medicine:** The AMCAS (American Medical College Application Service) application is available via the web at [www.aamc.org/amcas](http://www.aamc.org/amcas). The deadline for the application is December 15 of the year prior to matriculation.

**Graduate Studies and Research:** The Meharry application process is followed for Graduate School programs. The Graduate School application is available via the web at [www.mmc.edu](http://www.mmc.edu). The deadline is March 15 of the year of matriculation.

Each applicant must complete the following steps:

- Complete and submit an Admissions Application
- Dental and Medical applicants send transcripts to the application service while Graduate applicants send transcripts to Meharry Medical College Office of Admissions and to the School of Graduate Studies and Research.
- Complete and submit a Supplemental Application
  - Only Dental and Medical school applicants are required to complete a Supplemental Application.
  - Once the AADSAS or AMCAS application is received, the Office of Admissions will forward instructions to the applicant for completion of a Supplemental Application online.
- Submit letters of recommendation
  - Three letters of recommendation are required for applicants to Dental and Medical Schools and should be mailed to the respective application services (AADSAS or AMCAS).

- Two letters of recommendation are required for applicants to the Graduate School and should be mailed directly to the Admissions Office at Meharry Medical College.
- Admission Tests
  - All applicants are required to take the Admissions Test for the program to which they are applying.

**Dental School: Dental Admissions Test (DAT):** Dental applicants must take the Dental Admission Test (DAT). The test is offered monthly. For more information about the DAT, visit the website:

[http://www.adea.org/dental\\_education\\_pathways/aadsas/Applicants/Pages/RegisterfortheDAT.aspx](http://www.adea.org/dental_education_pathways/aadsas/Applicants/Pages/RegisterfortheDAT.aspx)

**Graduate School—Ph.D. & M.S.P.H.: Graduate Record Examinations (GRE):** Graduate applicants must contact the GRE Educational Testing Service, P.O. Box 6000, Princeton, NJ 08541-6000, (609) 683-2002, to take the GRE test and have the test scores submitted to Meharry Medical College. For more information about the GRE, visit the website: <http://www.ets.org/gre/>

**Medical School: Medical College Admissions Test (MCAT):** Medical applicants must take the MCAT. This test is administered multiple times from late January through early September throughout the United States. For more information, visit the website: <http://www.aamc.org/mcat>

Complete applications are reviewed by a Screening Committee of the Admissions Committee for each school; selected applicants are invited for interviews. Once selected for interviews, applicants are notified by the Office of Admissions and arrangements are made for the candidate to be interviewed on the campus or at a regional location. An evaluation of the interview is submitted to the Admissions Committee for action. Each Admission Committee submits final recommendations to the Dean of their respective school. The Office of Admissions notifies each interviewed candidate of his or her admissions status. Applicants receiving an offer of admission are required to submit a letter of acceptance. Dental applicants must submit an \$800 deposit and Medical applicants must submit a deposit of \$300 at the time of acceptance. The deposit is applied to the tuition of the matriculating student. If the medical applicant withdraws their application prior to April 15, two-thirds of the deposit (\$200) is refunded. Dental School deposits are non-refundable.

Inquiries regarding the status of an admission and/or supplemental application should be directed to the Office of Admissions and Recruitment.

Additional information regarding the admissions requirements of each school is found in the respective school sections of this catalog.

## **New Student Orientation**

New Student Orientation is coordinated by the Office of Student Services and Enrollment Management and is a mandatory one-day program for all incoming freshman students. During New Student Orientation, students receive pertinent information that will help them to succeed at Meharry Medical College throughout their matriculation. This general orientation is the mechanism used to introduce new students to the College.

All freshman students are assessed an Orientation Fee. This non-refundable fee includes costs associated with the preparation and implementation of orientation. All three schools have their respective orientation program beginning the day after New Student Orientation.

## **Registration**

A student cannot register until he/she has received official notification of admission to the College. Each student is required to complete a trial schedule with the Student Academic Affairs Office in his/her respective school. The trial schedule is forwarded to the Office of the Registrar and entered into the Banner system as the student's official registration record. Once the trial schedule is entered, tuition and fees are assessed.

The registration process is not considered complete until tuition and fees have been paid in full or a payment plan has been arranged with the office of Student Financial Services. To assess registration status, students can log onto Banner Student Self-Service to view all courses scheduled, financial aid awarded, and account balances.

**Please note:** Submission of a schedule to Academic Affairs does not validate registration. If holds exist, the registration form will not be processed. It is the student's responsibility to take care of all outstanding holds prior to registration.

***Cross Registration.*** Meharry Medical College participates with Fisk University, Tennessee State University, and Vanderbilt University in cooperative programs among the four participating institutions. Students who desire to cross-register (take courses at a participating school) must determine if the courses are available and obtain the permission of the respective dean and advisor to enroll in such course(s). He/she must then bring a signed statement of permission (schedule) to the Office of the Registrar to complete the registration process.

## **Center for Educational Development and Support**

The Center for Educational Development and Support, located in the Daniel T. Rolfe Student Center, offers a variety of academic support services for students. These services include:

- Skills Profile Assessment
- Skill Improvement Instruction in:
  - Time Management
  - Analytical Reasoning and Critical Thinking
  - Stress Management
  - Self-Confidence Building
  - Reading & Comprehension
  - Test Taking Strategies
  - Note Taking
  - Study Techniques
  - Individual Skills Development Consultation
- Computerized Student Practice Testing
- Peer Tutoring
- Small Group Intervention Review Sessions
- Small Group Case-Based Review Sessions
- Comprehensive Medical Review Program - USMLE STEP 1 and STEP 2
- Comprehensive Dental Review Program NDBE PART 1 AND PART 2

## **Fall Convocation**

At Meharry, Fall Convocation symbolically opens each new academic year and celebrates the scholarly success of students and faculty. Convocation is held on campus in October.

## **Commencement**

A student is eligible for graduation if he/she has satisfactorily completed the academic requirements outlined in the school's Policy and Procedures Manual, including the completion of passing Step I and Step 2 Board (SOM), Part I and Part II Board (SOD), and submitting a final approved thesis or dissertation (MSPH/Ph.D.).

A favorable vote of the faculty from each of the respective schools with concurrence of the dean is required for candidacy for the M.D., D.D.S., M.S.P.H., M.S.C.I. and Ph.D. degree.

The degree is awarded at the commencement exercise held the third or fourth Saturday of May each year. Meharry Medical College's official degree dates include the date of the May commencement, June 30, October 31, or December 31.

## **Academic Computing**

Academic Computing is committed to promoting excellence in teaching and learning to the students and faculty of Meharry Medical College. The primary mission of Academic Computing is to help faculty and students achieve academic excellence in and out of the classroom using technology innovations.

Through the support of technology, we continue to improve teaching and learning by focusing on the integration of pedagogy with technology. The Academic Computing staff facilitates and trains faculty, staff, and students on the use of existing technologies as well as research and implement new technology.

**Services.** These and other services are offered by the Academic Computing staff:

- One-on-one technology training and/or group training
- Consultations on pedagogy and technology integration
- Assess use of existing technology
- Implement and assess new technology
- Assist with course design and development
- Assist faculty and students with media
- Assist students with email
- Assist students with printing

### **Technologies.**

- Blackboard
- Camtasia Relay (Capture)
- PRS Clickers
- Respondus
- Technology Classrooms

**Publications.** The *Academic Computing Newsletter* is a publication that emphasizes the use of current technology and showcases new technology. The publication provides tips as well as information about upcoming webinars, workshops, and speakers.

**Contact Us.** Academic Computing is located in West Basic Sciences (WBS) on the 2<sup>nd</sup> floor in room 2003. Please feel free to contact us at 615-327-6265 or email [academiccomputing@mmc.edu](mailto:academiccomputing@mmc.edu).

## **Office of Lifelong Learning**

The mission of the Office of Lifelong Learning is to provide relevant continuing medical and dental education for physicians, dentists and other health care professionals, based on identified educational needs. This will reflect recent developments in clinical practice in all specialties, biomedical sciences, medical and dental ethics, and health care delivery. Special emphasis is on offering courses on diseases and health conditions that disproportionately affect ethnic minority populations.

Meharry Medical College is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians. (AMA – Category I Physicians Recognition Award). Meharry Medical College is also an American Dental Association (ADA) Continuing Education Recognized Provider, (ADA-CERP Provider).

## **General Financial Information**

### **Student Financial Services**

Meharry Medical College recognizes the importance of funding a professional school education. The primary responsibility of the Student Financial Services team is to manage all campus-based student loan programs and to receipt and disburse student aid in an accurate, efficient, and timely manner while complying with regulatory requirements. The team is committed to serving each student by assisting with meeting his or her financial needs in any way possible.

The Office of Student Financial Services consists of two units that provide a broad range of financial and related administrative support service to students. These units are Student Accounts Receivable and Student Campus-Based Loans.

### **Payment of Tuition and Fees**

Every student who registers at Meharry Medical College incurs a financial obligation to the College. Tuition and fees are assessed at the point of registration and are the financial responsibility of the student. Tuition and fee schedules are located in the school sections of this catalog. Students ineligible for financial assistance in the form of Federal aid, Institutional aid, or Scholarships are considered "Self-Pay" students.

"Self-Pay" students are expected to pay in full at the point of registration for the fall semester and on or before the first business day of the spring semester. Payment may be made by cash, credit card, check, or money order payable to Meharry Medical College. Payments should be remitted to Student Financial Services, Attn: Treasury Services, 1005 Dr. D. B. Todd, Jr. Blvd., Nashville, TN 37208. Monthly invoices are sent via the College's e-mail system. Student accounts delinquent more than 90 days may also be placed with an outside agency for collection and are subject to additional costs of collection expenses and reasonable attorney fees.

Meharry offers a Deferred Payment Contract plan. The contract is semester based and must be approved by the Dean of the respective school. The deferred contract requires an initial payment of one-fourth of the balance due plus a \$25.00 contract service fee. Contract participants who fail to make timely payments are assessed a \$50.00 monthly late fee.

Students whose accounts are delinquent may become ineligible to register for subsequent semesters; receive grades, transcripts, and withholding the diploma upon completion of degree requirements.

### **Disbursement of Excess Payments/Living Expense Funds**

Funds received in excess (living expenses) of the total tuition and fee charges for the semester will be disbursed (refunded) to the student within five (5) business days after the first day of class each semester. Beginning with the 2008-09 academic year, Meharry Medical College elected to transfer all student refunds via direct deposit to the student's checking or savings account. Students who do not have a financial institution can select to have their refunds generated by a paper check payable to the student. Direct deposit authorization must be submitted to the Office of Student Financial Aid.

## **Tuition Refund Policy**

Meharry Medical College will refund tuition and fees according to the schedule listed below if the student meets the following eligibility requirements. Students who leave the College during or at the end of the first semester are not charged for the second semester.

**Fees:** Fees are refundable in full on or before the last day of registration if a student officially withdraws from the College. After the last day of registration, there is no refund of fees. Students are not entitled to refund of tuition or fees paid by third parties; such will be refunded to the agency concerned.

**Tuition:** Refundable tuition for each semester shall be governed by the following schedule if a student officially withdraws from the College, from official registration in a course(s) (if hours fall short of the full-time minimum), or takes a leave of absence except that students on third-party payments shall not be entitled to tuition refunds; such will be refunded to the agency concerned.

The institutional refund policy will be aligned with the federal financial aid formula used to determine earned tuition and fees when a student is dismissed, withdraws, or goes on leave of absence. Specifically, the federal financial aid formula calculates the percent of term completed to determine the percent of monies received that is earned by the institution and student. The formula is as follows:

Completed days/total days = percentage; if the percentage is greater than 60%, then 100% of the funds are earned and no refund or return is required.

For more information about tuition refunds, contact: Student Financial Services, Division of Finance, Meharry Medical College, S.S. Kresge Learning Resources Center, 1005 Dr. D. B. Todd, Jr. Blvd., Suite 511, Nashville, TN 37208. The telephone number is (615) 327-6220. Information about the refund policy is also at <http://www.mmc.edu/finance/studentaccrc.html>.

## **Student Campus-Based Loans**

The Meharry Medical College Student Loan Office is responsible for managing all federal campus-based loan programs. We are responsible for the management and collection of Federal Perkins, Health Professions Student Loans (HPSL), Loans for Disadvantaged Students (LDS), and Primary Care Loans (PCL).

The student account will not be credited with loan funds until the student has completed an entrance interview. Before leaving the College, a student is required to participate in an exit interview for these loan programs. Students who participate in any federal loan program are required to complete an exit interview.

The Student Financial Aid Office determines student eligibility for financial aid and awards all federal and campus-based student loans. Award notices are sent to the student by the Student Financial Aid Office, with instructions to go to Student Financial Services (SFS) to complete an entrance interview. Once the student completes all required documentation, and signs the promissory note, the campus-based loan funds are credited directly to the students' account. If a credit balance is created, a refund is processed.

The Student Loan Office is also responsible for the collection of all campus-based loans. Once the borrower enters repayment, information and applications for deferment, forbearance, and cancellation can be obtained from our office. Student Loan Managers are available to provide repayment assistance including information about consolidation and loan rehabilitation.

For more information about Student Campus Based Loans, contact: Student Financial Services, Division of Finance, Meharry Medical College, Suite 511, Kresge Learning Resources Center, 1005 Dr. D. B. Todd, Jr. Blvd., Nashville, TN 37208; office (615) 327-6220 or fax (615) 327-6406.

## **Student Financial Aid**

Approximately 95% of Meharry's student body relies on financial assistance to aid them with financing their health professions education. Student financial aid pertains to funding proposed to help students pay educational expenses including tuition, fees, room, board, books, supplies, etc. for education at a college, university, or private school. Meharry Medical College's Office of Student Financial Aid makes available a broad range of financial assistance to worthy and qualified students. Most financial aid is awarded in accordance with demonstrated need for assistance, as determined by use of the Free Application for Federal Student Aid (FAFSA). Students are advised and counseled on all financial aid funds available. Meharry Medical College offers grants, scholarships, loans, and federal work-study to eligible students. Meharry participates in the student financial aid programs funded by the U.S. Department of Education, the U.S. Department of Health and Human Services, as well as, state and regional funding agencies. Most of the College's institutional scholarships are awarded based on criteria specified by donors, and some include outstanding academic performance.

Degree candidates that are U.S. citizens or eligible non-citizens are eligible to qualify for most federal student aid programs. Contact the Office of Student Financial Aid (615-327-6826) for additional information regarding the financial aid programs that are available at Meharry Medical College. More detailed information regarding student financial aid may be reviewed at the College's website at <http://www mmc.edu/students>.

## **Disbursement of Aid**

Meharry Medical College certifies, originates and disburses loan funds through the U. S. Department of Education's Federal Direct Lending loan program. Students will no longer be required to select private lenders to disburse student loan proceeds. All loan proceeds are disbursed under one umbrella and by one lender, the Department of Education. Financial Aid will be disbursed to the student's account on the first day of class at the beginning of each semester.

## **Scholarships**

Each year a number of scholarships are awarded to incoming and continuing students. There is no application for these Institutional Scholarships, which includes Honors/Incentives, Awards/Prizes, Named Scholarships and General Scholarships. Meharry Medical College is dedicated to creating a rich and superior academic environment for each student. This environment is enhanced by the inclusion of students who are talented and represent a broad spectrum of society—cultural, social, and economic.

**Honor/Incentives Scholarships** are awarded with an attached stipulation, in that, the scholarship will continue up to four years of study, as long as students maintain satisfactory academic performance, as specified by the guidelines of the Scholarship Committee of each school.

**Awards/Prizes and Named Scholarships** are awarded during the annual Convocation ceremony, which is usually held in October each year. Recipients are selected by the respective schools' Scholarship Committees, based on the criteria as determined by the donor. Selected students will generally be notified in late September or early October. A list of scholarships awarded is published in the annual Convocation program booklet.

**General Scholarships** are awarded annually and may be awarded as funds are available. A Scholarship Committee selects all scholarship recipients.

Additional scholarship information is available in the Office of Financial Aid and/or the Offices of Student/Academic Affairs in each school. For more information contact: Student Financial Aid, Division of Student Services and Enrollment Management, Meharry Medical College, First floor, Henry A. Moses Building, 1005 Dr. D. B. Todd, Jr. Blvd., Nashville, TN 37208; Office: (615) 327-6826; Fax: (615) 327-6951; E-mail: [finaid@mmc.edu](mailto:finaid@mmc.edu).

## General Regulations

### General Regulations

The faculty and administration of Meharry Medical College expect full cooperation from the student body in the maintenance of high moral and ethical standards. Meharry Medical College reserves the right to dismiss a student at any time if his/her conduct is considered unsatisfactory. On the other hand, students should expect and receive courteous and helpful assistance from staff and innovative instruction and research methods from the faculty.

The following general regulations apply to all students enrolled at Meharry Medical College:

- Personal integrity and honesty are very important attributes of a professional; therefore, any student involved in irregularity in an examination will be referred to the College Disciplinary Committee for action.
- Any student who withdraws from the College must comply with the College's official withdrawal policy. Students who drop out after the end of the refund period will be assessed full tuition and fees for the semester.
- The use of the name "Meharry Medical College" is forbidden on all student orders except as it may appear in the mailing/shipping address.
- Programs for public exercises of entertainment sponsored by the students or student organizations, in which the name of the College is used, must be submitted to the Office of Student Services and Enrollment Management for approval.
- Meharry Medical College is not responsible for personal property that may be lost or damaged on its premises.
- No student of Meharry Medical College shall treat or prescribe drugs for patients except during regular clinics or dispensaries of the hospitals connected with the College and then only under the supervision of the practitioner of medicine or dentistry who must sign the prescriptions and is licensed in the state in which the hospital or clinic is located. All students must abide by the Meharry Medical College Substance Abuse Policy. The Substance Abuse Policy is available in the Student Handbook and at [www.mmc.edu](http://www.mmc.edu).

### Name Change

A currently enrolled student may file a request for a name change with the Office of the Registrar. A notarized Name Change Request form must be accompanied by supporting documentation such as:

- Birth Certificate
- Court Order
- Divorce Decree
- Marriage Certificate

The College reserves the right to request multiple forms of documentation for verification. A driver's license or social security card is not valid documentation for a name change. When the request for a name change is approved, the change will be made in the Banner system. Once students leave the College, no further name changes can be made to the academic record.

## **Request for Licensures, Deferments, Verifications, and Transcripts**

The completion of deferments, enrollment verification, licensures and all other requests processed by the Office of the Registrar are free. There is a two to three day processing time for all requests. However, during busier times such as registration and graduation, processing time may take up to five business days. Processing time does not include delivery time from the United States Postal Service.

Current students and Graduates from 2007 forward can view and submit transcript requests online via Banner Student Self-Service. Those who completed prior to 2007 can submit a Transcript Request form to the Office of the Registrar via mail or fax. This form can be found on the Office of the Registrar's website (<http://www.mmc.edu/academicaffairs/registrar.html>).

Those who do not have access to the internet may write a letter and mail or fax it to Meharry Medical College Office of the Registrar. The following information should be included with all requests:

- First and last name (include maiden name, if applicable)
- Social Security/Student identification number
- Daytime phone number or e-mail address
- School attended: Medical, Dental, Graduate
- Approximate dates of attendance
- Number of items requested
- Names and complete addresses for all recipients
- Delivery Method: pick-up or mail
- Requester's handwritten signature

All requests may be submitted to: Meharry Medical College, Office of the Registrar, 1005 Dr. D.B. Todd, Jr. Blvd., Nashville, TN 37208-3599; office, (615)327-6223; fax, (615)327-6228.

Requests submitted by or on behalf of students or alumni with financial holds cannot be processed.

## **Request for Duplicate Diplomas**

A certificate of graduation may be issued upon proof indicating that the diploma was stolen, lost or destroyed, accompanied by a notarized statement. A duplicate diploma may be given if the officials who signed the original diploma are still associated with the College. If not, a diploma with signatures of current leadership will be issued. A fee of \$75 is charged for this service.

## Academic Regulations

### Grades

Grade point averages are based on the 4-point grading system. The grading scale consists of the following: A (Excellent), B+ (Outstanding), B (Very Good), C+ (Above Average), C (Average), or F (Failure), which appears on the official transcript.

The grade "C" is unacceptable in Graduate School degree programs. It is awarded but must be balanced by academic exception in other courses or repeated.

Incomplete (I) grade means that the student has completed at least 3/4's of the course, but for legitimate reasons, a small fraction of the work remains to be completed. Or, that the student's record indicated that he/she can obtain a passing grade, but lacks a specific requirement such as the final examination, due to illness or some other unique circumstance beyond the student's control

All final grades will remain on a student's permanent transcript.

### Other Symbols Related to Academic Standing

- WV      withdrew voluntarily
- WA      withdrew administratively
- WF      withdrew failing
- WP      withdrew passing
- NR      none reported
- IP      In Progress (continuous Course)
- NGC      Non-graded Course
- P              Passing
- S              satisfactory
- U              unsatisfactory
- E              Excluded from GPA calculation

### Leave Of Absence

A leave of absence is an interruption of the normal course of study requested by the student and requiring prior approval by their respective dean. A student's leave of absence shall not extend beyond one calendar year. An official leave of absence form must be processed and may be picked up in the Office of the Registrar. A leave of absence from the College is given only to students who are in good academic standing. Any other interruption in the normal course of study constitutes a withdrawal. At the discretion of the dean, a student may be required to take an administrative leave of absence. Additional information regarding leave of absence is found in the Academic Catalog section for each school.

### Withdrawal from a Course

When a student withdraws from a course, he or she must get the appropriate forms from his/her respective Academic Affairs office. The student shall be required to get the approval of the respective department head, the Associate/Assistant Dean for Student Academic Affairs, and final approval from their respective Dean. The form must be returned to the Registrar's Office. The criteria for withdrawal are outlined in each of the school's academic policies and procedures manuals and in the Academic Catalog section of this document for each school.

## **Withdrawal from the College**

A student may withdraw from Meharry Medical College after completing and depositing the official withdrawal form, properly executed with the appropriate signatures, in the Registrar's Office. Grades for completed courses shall be recorded on the official record, including a "WF" or "WP" for courses in which the student is enrolled at the time of withdrawal. If the student desires to return to Meharry Medical College, the formal readmissions application process must be completed in the Admissions Office.

Additional information regarding withdrawal from the College is found in the respective section of this document and in the Academic Policies and Procedures Manual for each school.

## **Advancement**

Promotion to the next class or graduation requires satisfactory completion of all courses. Recommendations for promotion are made by the Faculty Evaluation Committee appointed for the respective years of instruction, except in the case of the senior class where the general faculty of the respective schools approve students for graduation.

Representatives from each department involved in a given year's instruction compose the various evaluation committees. The dean of the school, the vice dean, associate deans for Student and/or Academic Affairs or his/her equivalent, and the College Registrar are *ex- officio* members.

These committees serve as forums wherein instructors discuss the final estimates of the student's academic standing in all subjects. The dean makes recommendations concerning promotions and the disposition to be made of students who encounter academic difficulty. Recognition is also given to superior work. The Registrar's Office is notified by the Committee Chair of the actions of the Committee.

At the end of the senior year, the dean and the general faculty of the respective schools recommend to the Board of Trustees those students who have satisfactory scholastic records for the entire course of study and who, in the judgment of the faculty, give evidence of personal fitness for the practice of their profession.

## **Unsatisfactory Academic Performance**

Each school has an established Satisfactory Academic Progress Policy. These policies are located in the respective school sections of this document.

## **Honor Policy**

Meharry Medical College reserves the right to reprimand, require withdrawal, or to dismiss any student for unprofessional conduct or behavior. Among the behaviors that may lead to disciplinary action are: cheating, deception, sexual harassment, fraud, destruction of property, substance or alcohol abuse, and criminal activity.

**Specifications.** Accusations involving students will be transmitted in writing to the College's Student Disciplinary Committee. Any individual may inform any committee member of alleged violations. Immediate action may be taken for emergency infractions/violations until a formal disciplinary hearing can be conducted. The Committee will review referred cases and take appropriate action. Students may appeal any discipline committee action by written communication to the President of the College. The procedures for review and appeal of disciplinary actions are published in the Policies and Procedures Manual of each school/division.

As members of the College academic community, students are subject to the obligations and responsibilities that accrue to them by virtue of this membership. The demonstration of appropriate conduct and exercise of applicable responsibilities is expected.

Students, faculty, staff, and/or test administrators must report observed violations to a member of the school Honor Council, in accordance with Honor Code procedures. Any alleged violation shall be immediately reported by the President of the Honor Council, or Faculty Advisor, to the principal clinician or scientific investigator after the alleged violation is received.

Breach of rules, regulations, policies and procedures governed by the disciplinary procedure shall include, but is not limited to:

1. **Furnishing False Information.** It shall be a breach of conduct for any student to intentionally:
  - Furnish false information to the College with the intent to deceive, forge, or in any way alter or falsify documents or evidence required for admission to the College.
  - Give false information or testimony during the investigation or hearing of a disciplinary matter.
  - Forge, alter, destroy, damage or misuse College documents, records, or identification.
  - Present the work of another individual or source as one's own concepts or ideas;
  - Submit for credit any academic work for which credit has previously been obtained or that is being submitted to another course or assignment;
  - Falsify or alter any institutional, research, and/or academic record or make use of such forged or altered records;
  - Remove or destroy information related to patient treatment or one's own academic or clinical work; and
  - File false charges or accusations against another individual.
2. **Theft or Misappropriation of Funds.** It shall be a breach of conduct for any student to intentionally engage in the following:
  - Theft, destruction, or damage of intellectual or informational property of the College or an affiliate's property;
  - Theft or misappropriation of school funds;
  - Theft, destruction, or damage of College property;
  - Theft, destruction, or damage of the property of another person;
  - Theft of supplies, property, equipment or examinations.
3. **Breach of Rules.** Breach of recognized ethical and professional standards applicable to health professional schools include, but are not limited to the following:
  - Unauthorized entry to College facilities and/or possession of keys to College facilities.
  - Failure to comply with directives of College officials acting in the performance of their duties.
  - Violation of written College policies and regulations.
  - Violation of the terms of probation.
  - Attempt to commit or to be accessory to the commission of any act in violation of this or other standards of conduct.
  - Breach of any municipal, state, or federal laws, rules, regulations, ordinances on College property.
  - Breach of rules of any institution while on rotation at that institution.

4. **Physical Assault.** Physical assault of any person on College-owned or controlled property, or conduct which threatens or endangers the health or safety of any person will be considered a breach of conduct.
5. **Examination Dishonesty.** Any use of unauthorized assistance during an examination constitutes dishonesty and represents unacceptable examination behavior. Examples of examination dishonesty include: communication with another student in any manner during an examination; copying material from another student's examination; permitting a student to copy from an examination; use of unauthorized books or notes; falsification/misrepresentation of academic or clinical performance; impersonation of another student at any examination or other form of academic work; interference with an instructor's administration of an examination, giving and/or receiving aid during an examination.
6. **Improper Patient Care.** Improper patient care includes, but is not limited to, the following:
  - Failure to provide care for assigned patients or to carry out assigned activities.
  - Failure to respect patient and/or professional confidentiality.
  - Unsupervised patient care.
  - Provision of patient care or conduct of professional activities when physical, mental, or emotional factors may compromise adequate care or results.
  - Willful disregard of patient care/other directives from supervising faculty.
  - Rendering of patient care or other professional activities when under the influence of alcohol or other drugs.
7. **Sexual Harassment.** Sexual harassment is prohibited by College policy and by law. Sexual harassment is defined as any sexual solicitations, advances, remarks, or actions that are demeaning or intimidating. Sexual harassment constitutes any sexual attention that is unwanted, deliberate, and/or repeated advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature when (1) submission of such conduct is made explicitly or implicitly the terms or condition of an individual's employment or academic standing; (2) submission to or rejection of such conduct by an individual is used as a basis for employment or educational decision affecting an individual; or (3) such conduct has the purpose of unreasonably interfering with an individual's work or academic performance, or of creating an intimidating, hostile or offensive environment for working or teaching and learning.

Responsibility for implementing the Sexual Harassment policy is delegated by the President to the Vice President and General Counsel and the Affirmative Action Officer for assuring implementation of the policy. The complete policy on sexual harassment is presented in The College Policy Manual and the Academic Policy Manual for each school.

8. **Substance/Alcohol Abuse.** The following behaviors constitute conduct code violations:
  - possession of illegal drugs/substances
  - sale of illegal drugs/substances
  - drunken or disorderly conduct on the campus or affiliate site

Violation of these provisions of the Code of Conduct shall result in the imposition of one or more of the disciplinary actions set forth in the Substance Abuse Policy and Drug-Free Workplace Statement, which is presented in the College Policy Manual and the Academic Policy Manual for each school. Violation of these standards of conduct may result in severe criminal penalties under local, state, and federal law.

## **Procedures for Review and Appeal of Academic Dismissal Actions**

A student's academic status is determined by the Student Evaluation and Promotion Committee in each school.

The process is as follows:

1. The responsible faculty awards definitive grades. The instructor or course committee designates a grade for the student and submits it electronically to the Office of the Registrar.
2. The Registrar (or his/her designee) receives all grades from each of the Schools and provides them to the appropriate Student Evaluation and Promotion Committee (SEPC), which consists of members of the teaching faculty appointed by the Dean. The Dean of the school concerned determines the number and mix of each SEPC.
3. The appropriate SEPC recommends an academic status for each enrolled student based on the School's academic policies. The Office of the Registrar records the recommendations. If SEPC makes a dismissal recommendation, the AVP for Enrollment Management will notify the appropriate Academic Affairs Dean of the SEPC recommendation within 24 hours. The Academic Affairs Dean will then notify the student of the dismissal recommendation, in person and in writing, within three (3) working days. The student will be required to sign for the letter.
4. The Assistant Vice President (AVP) for Enrollment Management will also notify the Financial Aid Office of the dismissal recommendation for closer monitoring of future disbursements and continued eligibility for federal financial aid.
5. If a student is recommended for dismissal, they will be invited to appear in a dismissal hearing with the appropriate school's Ad Hoc Dismissal Committee where they can present their case and respond to questions from the Committee. The School's Academic Dean, in consultation with the Dean, will establish the Ad Hoc Dismissal Committee's membership. The dismissal hearing must occur within ten (10) working days of the date of the written notification to the student.
6. Failure to appear for the hearing will be interpreted as acceptance and confirmation of the dismissal recommendation. For the hearing, the Committee will accept, either in person or in writing, up to three expressions of support for the student. This is not a legal proceeding. Therefore, representation by legal counsel is not permitted. The Committee will then deliberate and make a decision detailing specific curricular and/or behavioral requirements and stipulations, if the student is allowed to continue. The Academic Dean will communicate the Committee's decision to the student and Dean within twenty-four (24) hours, with the student required to pick-up and sign for the written decision letter within three (3) calendar days.
7. If a student is dismissed, they may appeal the dismissal decision to the Dean of their respective school. However, the basis for the appeal must be a compelling reason such as: (1) bias or (2) failure to follow due process on the part of the SEPC or Ad Hoc Dismissal Committee. A student must notify the Dean's Office within five (5) calendar days of the date of the dismissal notification letter if they wish to appeal. The Dean will hear the appeal based on the claim of compelling reasons, bias or failure to follow due process within ten (10) calendar days. The Dean will not rehear the case itself, but will evaluate the merit of the appeal claim. The Dean can either uphold or overturn the dismissal decision. All decisions at the Dean's level are final and must be communicated to the student, appropriate School Academic and/or Student Affairs Dean, Executive President/Provost, General Counsel, AVP for Student Services and Enrollment Management, Office of the Registrar, Treasurer's Office, and Financial Aid within five (5) calendar days.
8. A student will continue to be enrolled, or eligible to be enrolled, throughout the dismissal hearing and appeals process until all appeal rights have been exhausted. Financial Aid and Training Grant Directors (such as T32 training grants in graduate

school) will closely monitor the potential financial impact on the student to ensure their needs are met and reserves the right to establish a special disbursement schedule for living expenses. Financial Aid and Training Grant Directors will also protect the College's interests and compliance with federal regulations to ensure that if the dismissal recommendation is upheld, the student will not have been over-awarded financial aid.

9. If the dismissal recommendation is upheld, the effective date of the dismissal will be the hearing or final appeal date, whichever is later, and the College's refund policies would apply as of that date.

Failure to comply with these requirements shall waive and terminate any further rights the student may have under this procedure.

## **Student Dismissal and Appeals**

The Student Disciplinary Committee reviews charges of breaches of the rules, regulations, policies, and procedures of Meharry Medical College relating to all non-academic matters. Members of the Committee shall be appointed for a two-year term except for the student member, who shall be appointed on an annual basis. The Student Disciplinary Committee and its chairperson shall be appointed by the president. Any person may inform any member of the Student Disciplinary Committee of an allegation of a breach of rules, regulations, policies, and/or procedures of Meharry Medical College within the jurisdiction of the Student Disciplinary Committee. The Student Disciplinary Committee shall determine whether the allegations or charges, if proven true, are governed by the procedures for review and appeal of disciplinary action governing non-academic matters.

If the Student Disciplinary Committee determines that the allegation or charge is governed by the procedures for review and appeal of disciplinary actions, the chairperson shall send a written notice to the student stating the charge(s) and notice of a hearing before the Student Disciplinary Committee. The student shall receive notice of the scheduled hearing no later than 72 hours before the hearing. The Student Disciplinary Committee may grant additional time, at its discretion, if the student's request is reasonable.

In the event of a challenge of whether a matter should be governed by the procedure for review and appeal of academic actions the Senior Vice President for Health Affairs/Dean of the School of Medicine, Dean of the School of Dentistry and Dean of the School of Graduate Studies and Research shall have sole responsibility for determining which procedures shall govern. Any such challenge must be submitted in writing to the Dean of the respective schools no less than 24 hours before the scheduled hearing.

The student shall have the right to be present at the hearing to present witnesses, to rebut the evidence against him/her and to have a Meharry Medical College student or faculty member accompany him/her. Legal counsel may be present but may not participate in the hearing.

The hearing will be an informal one, not governed by technical rules of evidence as employed in a court of law, but the Student Disciplinary Committee may accept any information it deems pertinent to the charges made.

The Student Disciplinary Committee shall render its decision based upon the evidence presented at the hearing. The standard for determining whether the student has breached a rule, regulation, policy or procedure, and is subject to disciplinary action, shall be whether a preponderance of the evidence supports the Committee's decision. The burden of proof shall be upon the College.

The Student Disciplinary Committee shall maintain a record of the hearing pending final determination of the charges against the student.

The Student Disciplinary Committee shall notify the student of its decision in writing by certified or registered mail at the address maintained in the Registrar's Office within 15 days.

A student may appeal the decision on the grounds as set forth in the following paragraph by writing a letter of appeal to the president no later than 72 hours from the receipt of the decision of the Student Disciplinary Committee.

The President or his designee will determine whether there has been substantial compliance with the published administrative procedures and whether there is sufficient evidence to support the decision of the Student Disciplinary Committee. The President notifies the student by certified or registered mail at the student's address as recorded in the Registrar's Office. The president shall also inform the dean of the student's school and the Associate Vice President for Student Services and Enrollment Management.

The President may request the student and/or the Student Disciplinary Committee to provide additional information prior to issuing a decision.

The President's decision is final. The student shall be notified of the President's decision in writing no later than 15 days from the receipt of the student's appeal.

The student shall be allowed to continue in the academic program during proceedings unless extraordinary circumstances exist such as exemplifying conduct, which may endanger the welfare of others.

Breach of rules, regulations, policies and procedures governed by the disciplinary procedures shall include, but are not limited to:

- Furnishing false information to the college with the intent to deceive;
- Knowingly giving false information or testimony during the investigation or hearing of a disciplinary matter;
- Forgery, alterations, destruction, damage, or misuse of college documents; records, or identification;
- Physical abuse of any person on college-owned or controlled property; or conduct which threatens or endangers the health or safety of any person;
- Theft;
- Unauthorized use of or entry to college facilities and/or unauthorized possession of keys to college facilities;
- Failure to comply with directives of college officials acting in the performance of their duties;
- Violation of written college policies and regulations as stipulated herein or as announced by authorized personnel;
- Violation of the terms of probation;
- Attempt to commit or to be an accessory to the commission of any act in violation of other standards of conduct;
- Breach of any municipal, state, or federal laws, rules, or ordinances on college property;
- Breach of any rules of sister institutions while on rotations;
- Breach of recognized ethical and professional standards applied to student's area health professional schools.

The Student Disciplinary Committee's sanctions may include expulsion, suspension from one or more classes for a specified or an indefinite period of time, probation, reprimand and restriction of privileges. The Student Disciplinary Committee may use its discretion in requiring alternative disciplinary actions.

## **Student Immunization Policy**

Meharry Medical College is committed to providing a safe environment for the education of its students in the health professions and sciences, particularly those students who work in the hospital or with patients. Students, faculty, and staff in the health sciences setting are vulnerable to communicable diseases such as tuberculosis, measles, mumps, rubella, diphtheria and polio. Those students who may be exposed to blood or blood products also have the potential of being infected with hepatitis, HIV or other viruses. These diseases are susceptible to control by appropriate immunizations.

**Mandatory Immunizations: All students are required to submit immunization records for the following:**

- **Hepatitis B Series:** documentation of having received 3 separate doses and quantitative serological evidence of immunity.
- **MMR** (measles, mumps, rubella): documentation of having received 2 separate doses and quantitative serological evidence of immunity.
- **Varicella:** documentation of having received 2 separate doses of the vaccine or documentation of having had the disease confirmed by your healthcare provider, and quantitative serological evidence of immunity.
- **PPD** (Tuberculosis Skin Test): documentation of having received the test within the last 12 months or results of Chest X-ray and subsequent INH Therapy documentation if PPD was positive.
- **Tetanus/Diphtheria/Acellular Pertussis** (TdAP): documentation of having received the immunization within the last 10 years.
- **Polio**

Student Health Services will determine whether immunization documentation is adequate. Students, who cannot provide adequate documentation of prior immunization or physician-diagnosed diseases (as indicated by serological evidence) must receive immunization to these diseases prior to the beginning of the fall semester of the said academic year.

# School of Dentistry

## Administration

*Janet H. Southerland, D.D.S., M.P.H., Ph.D., Dean*

*Gregory A. Stoute, D.M.D., M.P.H., Executive Vice Dean*

*Shunta Curry-Sprouse, M.S., Chief of Staff*

*Walter R. Owens, D.D.S., F.A.C.D., F.I.C.D., Associate Dean of Development and External Affairs*

*Steven J. Brady, Associate Dean of Business and Finance*

*Gregory A. Stoute, D.M.D., M.P.H., Interim Associate Dean for Academic Affairs*

*Cherae Farmer-Dixon, D.D.S., M.S.P.H., Assistant Dean for Student Affairs*

*Thomas D. Luten, MA., Admissions Officer*

*Dr. Kim Butler Perry, D.D.S., Associate Dean for Clinical Affairs*

## Department Chairpersons

*Sharon Carter, D.D.S., Dental Public Health*

*Robert Michael Block, B.A., D.D.S., M.S., F.A.C.D.S., Endodontics*

*Gibson Johnson Jr., D.D.S., Oral Diagnostic Sciences*

*Charles Albury, D.M.D., Oral and Maxillofacial Surgery*

*Sandra Harris, D.D.S., M.S., Orthodontics*

*Kristen A. Darville, D.D.S., Pediatric Dentistry*

*James E. Tyus, D.D.S., Restorative & Periodontics Dentistry*

## **Dental Education at Meharry Medical College**

The School of Dentistry (SOD) offers a high quality and exceptionally nurturing educational environment to its students and has an impressive record of accomplishment of graduating students from a variety of socio-economic backgrounds. The School's practice of blending academically gifted students with those who demonstrate great promise but who require academic enrichment is a proven formula for success.

Students undergo a rigorous academic program that links oral health to overall health. The core curriculum of the dental program is four academic years. The first and second years of the four-year curriculum are devoted primarily to classroom and laboratory instruction in the basic and pre-clinical dental sciences. The third and fourth years focus on further development of clinical science skills under supervision of the faculty in all areas of dental practice. The clinical curriculum includes on-campus clinics, hospital experiences, and rotations at nearby community health centers and private offices. There are also opportunities to engage in clinical practice and research in locations outside of Nashville.

The dental school curriculum is dynamic and is regularly monitored and modified in response to contemporary trends in dental education, research, and oral health and dental practice. This strategy ensures that the educational experience more closely mirrors the actual practice of general dentistry and fully prepares the student with the competencies required for delivery of high quality care.

In addition to its regular dental program, the College has developed a Masters in Health Sciences, which serves as an alternative for admission. Students admitted to this program have graduated from an accredited college or university and show great promise, but lack competitive science grade point averages or Dental Admissions Test scores to be accepted into the dental education program. The program consists of a structured academic enhancement curriculum for one year to increase the students' level of knowledge in the areas required for admission and successful matriculation and two summer sessions of science and test taking reinforcement. Also, the school offers a combined DDS/PhD program in conjunction with the school of Graduate Studies and Research.

The School also sponsors two post-doctoral programs: One is in oral and maxillofacial surgery and the other is a 12-month general practice residency. Both programs are affiliated with Metropolitan Nashville General Hospital at Meharry and the local Veterans Affairs Medical Centers.

The School of Dentistry is a member of the American Dental Education Association. The undergraduate dental education program, general practice residency program, and the oral and maxillofacial surgery program are accredited by the American Dental Association's Commission on Dental Accreditation.

### **History of the School of Dentistry**

Throughout its illustrious history, it has been known as a national resource for providing a strong curriculum in community-oriented clinical dentistry and basic principles of research. The idea to establish a dental department within the Meharry medical department originated in the minds of a few medical alumni, but it was not until eight years later, in 1884, when the trustees of Central Tennessee College considered the feasibility of adding dental education as part of the medical curriculum.

In June of that same year, Dean George Whipple Hubbard, M.D., announced that arrangements for opening the dental department had been consummated. Officially founded in 1886 as a

department that would “provide the Colored people of the South with an opportunity for thoroughly preparing themselves for the practice of dentistry,” Meharry’s dental program opened its doors to nine students, three of whom were physicians, on October 4, 1886. Initial requirements for admission were that applicants needed to be at least 19 years old and of good moral character. Additionally, they were mandated to “pass a satisfactory examination in reading, writing, arithmetic, spelling, geography, and grammar, or bring satisfactory evidence of having completed a course in some recognized Normal School, Academy, or College.” The basic costs of a Meharry dental education included a \$30 annual fee and \$10 graduation assessment. It bears mentioning that the dental department of Central Tennessee College (Meharry’s first home) was launched as the first institution in the South for training African-American dentists.

Over 125 years later, the Meharry Medical College School of Dentistry continues to fulfill Dr. Hubbard’s vision, serving not only as one of two historically Black dental schools in the nation, but also as a beacon for underserved populations all over the world who receive quality, compassionate, professional dental care.

## **Mission of the School**

The School of Dentistry at Meharry Medical College is committed to its heritage of providing health education, research and health service opportunities for African Americans, underrepresented ethnic minority and other promising students. This is accomplished in a nurturing environment through a recognized Center of Excellence for the delivery of community health care service, health promotion and disease prevention, extensive primary care training and the conduct of research and other scholarly activity with special attention to disease and conditions that disproportionately affect ethnic and other minority populations.

## **Objectives of the Academic Program**

The School of Dentistry is committed to providing a high-quality education in an environment conducive to teaching, learning, and research that will lead to the Doctor of Dental Surgery Degree.

The following objectives guide the academic program:

- Provide high quality and contemporary classroom instruction
- Provide high quality clinical instruction producing a competent dental practitioner
- Provide a state-of-the-art physical facility for instruction
- Foster an interest in research development
- Provide mentorship to support students
- Provide academic support services as needed on an individual basis
- Prepare the student to successfully challenge the National Board Dental Examination Part I and Part II
- Prepare the graduate to successfully challenge state and regional licensure examinations

## **Patient Care**

In the dental clinics, *Comprehensive Dental Care* is defined as a *system of clinical instruction and operations which permit the student to provide*, or be responsible for, all aspects of a given patient’s dental treatment needs in a manner that closely resembles the way the student will provide care in a private practice subsequent to graduation. The concept of comprehensive care

forms the foundation for all clinical treatment within the School of Dentistry. This concept is facilitated by two basic approaches including *comprehensive patient care and specialty rotations*. This broad-based approach enhances the environment in which high quality dental health care can be delivered in a more humanistic manner by students. It is expected that in using this dual approach to care, the barriers, which delay high quality care, will be removed. Systematic treatment planning and a patient referral system permit the student to become aware of the needs of the patient and the skills required to satisfy these needs.

The School of Dentistry retains the sole authority and responsibility for its operations. Patient care rendered by student practitioners is provided under the direct supervision of licensed faculty members. All dental procedures rendered by student providers must be performed in the presence of a licensed supervisor and must be evaluated and approved prior to and during service provision. Periodic and final evaluations are required prior to reappointment and patient dismissal. The supervising faculty must ensure that each treatment encounter is appropriately entered in the patient's electronic records and signed by the student and the faculty person evaluating the procedure(s).

## **Research**

The Research mission of the School of Dentistry at Meharry Medical College is to bridge Basic Sciences and the Dental clinical practice through research excellence and to educate dental scientists for academic and research leadership positions. Recent advances in basic sciences, the completion of the human genome project, the advancement of genomics and proteomics as well as the interdisciplinary nature of research in oral health and disease processes and treatment, are key to position the School of Dentistry as a leader in the national effort to relate these findings to systemic health, and to translate these advances into improved dental care and oral health especially as they relate to the health of underserved populations and the elimination of oral health disparities.

## **School of Dentistry Academic Program**

The School of Dentistry offers a four-year pre-doctoral program in general dentistry, which is designed to prepare the matriculant to provide competent oral health services to the population at large. This is accomplished through an interdisciplinary curriculum of didactic and clinical experiences. These experiences provide a diverse knowledge base, clinical skills and competencies necessary in the practice of modern general dentistry. The program is also geared to provide a solid base for scientific inquiry and for a lifelong pursuit of continuous education.

The first and second years of the four-year curriculum are devoted primarily to classroom and laboratory instruction in the basic and pre-clinical dental sciences. The third and fourth years focus on further development of clinical skills under supervision of the faculty in all areas of dental practice. Emphasis in all years is placed on the concept of comprehensive patient care. Students gain clinical experiences in other settings such as hospitals, public health facilities and other extramural environments as a part of the overall pre-doctoral program. Successful completion of the prescribed academic/clinical program and evidence of high ethical and moral behavior leads to the Doctor of Dental Surgery (D.D.S.) degree.

The School of Dentistry offers graduate programs in General Dentistry and in Oral and Maxillofacial Surgery. These programs accept Meharry School of Dentistry graduates as well as graduates from other U.S. and Canadian dental schools. In addition, a graduate dual degree program DDS/PhD program.

The curriculum in the School of Dentistry is dynamic. It undergoes constant change in response to contemporary trends in dental education and dental practice. The School of Dentistry will

modify any portion of the curriculum and will make such changes as necessary with a commitment to maintaining an overall academic program that meets the highest standards.

The study of dentistry is rigorous and demands considerable time, energy, a high degree of self-discipline and effort. It requires a cooperative effort between faculty and students toward the common goal of the student's attainment of the cognitive and psychomotor skills necessary to practice dentistry.

## **Admissions**

### **Procedures**

The School of Dentistry participates in the Associated American Dental Schools Application Service (AADSAS) sponsored by the American Dental Education Association (ADEA). Persons desiring to submit an application for regular admissions must apply through the AADSAS, 1400 K Street, N.W., Suite 1100, Washington, D.C. 20005; 1-617-612-2045 ([aadsasinfo@aadsasweb.org](mailto:aadsasinfo@aadsasweb.org)). Persons applying must instruct ADEA to forward their credentials to the Office of Admissions, Meharry Medical College, School of Dentistry 1005 Dr. D.B. Todd Jr. Blvd., Nashville, TN 37208.

The deadline for all applications must be completed by December 15 of the year prior to anticipated matriculation. Upon receipt of the application from AADSAS, the Office of Admissions will send the applicant a letter acknowledging receipt of the AADSAS electronic data and advising them of materials needed to conduct a preliminary evaluation. A supplemental applicant and an application fee of \$65 must be paid to continue the process. This fee is non-refundable and cannot be credited toward tuition if the applicant is accepted.

It is the applicant's responsibility to have a report of his/her performance on the Dental Admission Test transmitted to Meharry Medical College Office of Admissions. The test must have been taken within three years of the proposed matriculation date.

Applicants who have been accepted by the Admissions Committee or placed on the waiting list, but who were not enrolled and who wish to enter in a subsequent year, must apply for readmission and must meet all of the requirements in force at the time of the new application.

All credentials received in fulfillment of admission requirements become the property of Meharry Medical College. Falsification of any portion of the data submitted for admission disqualifies the applicant for further consideration by the Admissions Committee.

The Admissions Committee reviews all applications. Candidates presenting credentials that do not meet the minimum requirements are so advised by the Chair of the Admissions Committee and/or the Director of Admissions and Recruitment. Each candidate who presents the minimum requirements is evaluated competitively and is either accepted, placed on the waiting list, or rejected because of relative qualifications. The appropriate admissions officer will inform the applicant of the action of the committee as soon as possible.

### **Admission Requirements**

The Admissions Committee of the Meharry School of Dentistry selects students for admission into the School's academic program. The committee is charged with the responsibility of selecting students who will make suitable candidates for the study and eventual practice of dentistry. One freshman class is admitted at the beginning of each academic year. The number of applicants greatly exceeds the capacity, and all applicants are considered on a competitive basis from the standpoints of scholarship, intelligence, aptitude, character, and general fitness to meet the historic mission of the college.

The Admissions Committee will consider the applications of candidates who meet the following minimum qualifications:

1. All matriculating students must have successfully completed at least 96 semester hours/140 quarter hours. All matriculating students must have successfully completed at least 96 semester hours/140 quarter hours from a US or Canadian accredited college or university

**2. REQUIRED PREREQUISITES:**

- a. 6-8 semester hours (8-12 quarter hours): English Grammar and Composition
- b. 3-4 semester hours (3-6 quarter hours): Calculus or Statistics
- c. 4 semester hours (6 quarter hours): Physics
- d. 8 semester hours (12 quarter hours): Biology
- e. 8 semester hours (12 quarter hours): General and Inorganic Chemistry
- f. 8 semester hours (12 quarter hours): Organic Chemistry with Labs
- g. 3 semester hours (6 quarter hours): Biochemistry

3. Additional ***strongly recommended*** courses: Anatomy/Physiology, Microbiology and Histology/Cell Biology. Other recommended courses include: Genetics, Molecular Biology, Sculpture and Pharmacology.
4. Students with "conditions" in college courses are not accepted. "Satisfactory Completion" of required courses is interpreted by the Admission Committee as an average grade of at least a B- in each subject field. "Satisfactory Completion" of two years pre-professional education is interpreted as an average grade of at least B- for the entire work of the two years. No student who has attained a general college average below B- will be eligible for consideration.
5. An official record of performance on the Dental Admission Test (DAT). The DAT scores must be no older than three years from the year of application.

Candidates for admission are evaluated on a competitive basis relative to acceptable scholastic records, satisfactory performance on the DAT, favorable recommendations from their pre-dental committees or from two of their instructors in the natural sciences, a dentist, and other evidence that they will become successful dental students and health care providers.

### **Veteran Students**

Meharry Medical College is authorized to certify the enrollment of veterans, dependents, and other eligible persons to the Veterans Affairs Department. These students are governed by the same policies and regulations as any student seeking admission and as any registered student. For additional information, see the section on Veteran Students in the College Overview of this catalog.

### **Admission to Combined Curriculum**

Several colleges and universities approve the combined pre-dental and dental curriculum leading to the baccalaureate degree. A student seeking admission to the combined curriculum should ascertain from the registrar of the institution in which three years of pre-dental work were completed whether the first year of dentistry taken at Meharry Medical College will be acceptable to that institution as the fourth year toward a baccalaureate degree. An official statement to this effect must be presented with the application.

**Joint Fisk/Meharry Program.** Fisk University and Meharry Medical College have developed a joint program in the biomedical and health sciences. Outstanding students admitted to this program will complete a three-year curriculum in general education courses and most of the science courses for a major in either biology or chemistry at Fisk University. Such a curriculum will include all prerequisites for entry into the Meharry School of Dentistry.

These students, upon admission to Fisk University, will have a position reserved in the dental program at Meharry Medical College following the successful completion of the prescribed three-year program at Fisk University. Students are eligible for a bachelor's degree from Fisk University following successful completion of the first academic year at Meharry Medical College. It is anticipated that an additional three years will be required to complete training for the DDS degree.

## **Admission to Advanced Standing**

The Meharry Medical College School of Dentistry will consider transfer requests from an enrolled dental school student only after the second year of dental school. The transfer process will take a significant amount of time and the applicant should submit the request to transfer in writing to the Chair of the Admissions Committee along with an \$800.00 application fee. If the transfer is approved, \$500.00 of the application fee will be applied to the student's tuition and fees. The remaining \$300.00 of the application fee is non-refundable. Transfer requests must be made no later than December 1 of the year prior to matriculation to the Meharry School of Dentistry.

The following policies apply to dental student requests for transfer:

- Transfer students must be reviewed and accepted by the Admissions Committee. There must be a space available in the class to which the transfer student is requesting admission. The recommendation for transfer must then be approved by the Dean.
- A transfer student can be accepted only at the end of his/her second year in dental school, and must be in good academic standing. He/she must also have taken and received a score on the National Dental Board Examination, Part 1 of at least 80.
- The Associate Dean for Academic and Student Affairs will assess the comparability of curricula between the Meharry School of Dentistry and the transferring institution and shall seek approval of all coursework from course directors regarding the acceptability of coursework from the transferring institution.
- No courses will be accepted with a grade of "D" or "F" or "N" or "I."
- The transfer student must submit copies of official transcripts to the Meharry Medical College Director of Admissions and Recruitment prior to matriculation to the Meharry School of Dentistry.
- The transfer student must be evaluated by the preclinical course directors prior to entering into comprehensive patient care.

## **Readmission**

An application for readmission must be made to the Chair of the Admissions Committee or the Director of Admissions and Recruitment and must be approved by the Admissions Committee. The applicant must meet all requirements in force at the time of submission. If the interruption has exceeded two years, applicants will be required to take examinations in courses for which they desire credit, unless otherwise advised by the Admissions Committee. Students who have been

dropped from the rolls of the College are eligible for reconsideration only under extenuating circumstances.

## **Admission of Graduates in Dentistry**

The School of Dentistry annually offers short refresher courses in the different disciplines of dentistry. The refresher courses are of two types: Continuing Education and Enrichment.

Continuing Education courses are designed for general practitioners who are graduates of dental school and who wish to pursue post-graduate studies without becoming candidates for a degree. The courses, hours and fees will be announced in special brochures that are prepared annually and will reflect the desires and needs of the general practitioners.

The Enrichment program is designed to improve the skills of dentists in the discipline(s) requested by a state board, regional testing agency or special request of a dentist. At the conclusion of the enrichment program, each participating dentist will receive either a satisfactory performance evaluation or a statement indicating that he/she has spent the required time in the area(s) specified.

Inquiries regarding either of these training programs should be made to the Office of the Dean. Students in both programs have to register through the Office of Records to receive proper credit and/or grades if required.

## **Continuing Education Coursework**

The School of Dentistry annually offers short refresher courses in the different disciplines of dentistry. The refresher courses are Continuing Education (CE).

Continuing Education courses are designed for general practitioners who are graduates of dental school and who wish to pursue post-graduate studies without becoming candidates for a degree. The courses, hours and fees will be announced in special brochures that are prepared annually and will reflect the desires and needs of the general practitioners.

Inquiries regarding the CE training courses should be made to the Office of the Dean. Students will have to register through the Office of Records to receive proper credit and/or grades if required.

## **Post-Baccalaureate Program**

The Meharry School of Dentistry no longer administers a Post-Baccalaureate Program.

However, students who have applied to the program and not been admitted may be invited to apply to the Master of Health Science Program administered by the Meharry Medical College School of Graduate Studies and Research.

## **Academic Regulations**

### **Requirements to qualify for the D.D.S. Degree**

1. Regular dental school attendance for a minimum of four years of academic instruction. Students transferring from other dental schools must matriculate a minimum of two academic years at Meharry Medical College School of Dentistry (see the School of Dentistry Catalog regarding admission and advance standing).

2. Satisfactory completion of both Part I and Part II of the National Board Dental Examinations (NBDE).
3. Satisfactory completion of all didactic and clinical courses, all clinical experiences, practical examinations and all Clinical Competency Examinations - which constitute the prescribed curriculum.
4. Demonstration of high standards of moral and ethical conduct.
5. Payment of all financial obligations to Meharry Medical College and the School of Dentistry.
6. Return of all loaned equipment, patient charts, borrowed items, etc.

## **Advising**

Academic and personal advising assistance is provided. Confidentiality is strictly maintained. Appointments are available upon request through the Office of Academic and Student Affairs.

## **Licensure**

The Final Clinical Competency Examinations (FCCE) and Mock Clinical Examinations is designed to allow senior students to demonstrate clinic competencies and time management.

If the student has applied to participate on a state/regional board examination for licensure, the student will be required to complete the FCCE and clinical boards successfully in all disciplines to be approved to take that state/regional board examination.

## **Examinations and Grades**

Examinations are held at the discretion of the instructor. Grade Point Averages are based on the 4-point system. The symbols A (Excellent), B (Above Average), C (Average), or F (Fail), which appear on the official transcript and on the grade report given to each student at the end of each semester, express the evaluation of the student's work.

Incomplete work is denoted by the "I" grade and indicates: (1) that the student has satisfactorily completed at least three-fourths of the course but, that for legitimate reasons, a small fraction of the work remains to be completed; or (2) that the student's record indicated that he/she can obtain a passing grade, but that he/she lacks a specific requirement such as the final examination because of illness or some other unique or extraordinary circumstances beyond the student's control. A student receiving an "I" must complete the requirements for the Course to remove the "I" by the end of the next semester. If the work is not completed within the specific time, no credit will be given and an "F" will be officially recorded as the final grade.

All final grades shall remain on a student's permanent academic transcript.

The symbols "WV" and "WA" indicate that the student "Withdrew Voluntarily" or was "Withdrawn Administratively."

The symbols "WP" and "WF" indicate that the student "Withdrew Passing" or "Withdrew Failing" respectively. These symbols are to be used only when the student has withdrawn after at least six weeks in attendance.

The grade "B+" (outstanding), "C+" (above average) and "P" (pass) are used in the School.

In addition to the letter grades of A, B, C, and F the following grading symbols are also used in the School of Graduate Studies and Research: "S" (Satisfactory) and "U" (Unsatisfactory).

There are didactic and clinical courses (clinics) that cover one semester or more in duration. Progress is evaluated throughout the year, although final grades are assigned at the end of the final semester. A record of student academic progress is reported at mid-term and at the end of the first semester, using a letter grade. The final grade is reported in the usual manner at the end of the course. Students may request information regarding their progress from the course coordinator at any reasonable time that is convenient for both the student and course coordinator.

Students will receive official copies of all grades at the end of each semester from the Office of Student Affairs and Enrollment Management.

All **final** grades will be recorded on the student's permanent transcript.

### **Leave of Absence**

A leave of absence is an interruption of the normal course of study requested by a student, which requires prior written approval by the Dean or his/her designee. A student's leave of absence shall not extend beyond one calendar year. The official date of leave shall not antedate the date of the student's request. An official leave of absence form must be processed and can be obtained from the Office of Student Affairs and Enrollment Management. Students will be withdrawn administratively (WA) from classes during an official leave of absence.

A leave of absence may be granted upon receipt of a written request. Some reasons for the request may be personal illness, personal and/or family extenuating circumstances (i.e., pregnancy, military duties, or other matters), financial hardship, emotional distress and other unusual or extenuating circumstances. The Executive Associate Dean for Academic Affairs may require documentation to accompany a request. If the situation is appropriate, the Associate Dean for Academic Affairs may recommend to the Dean that a student be placed on an administrative leave of absence. A student must make a written request to terminate a leave of absence for reinstatement to active status. Failure to terminate a leave of absence will result in automatic dismissal. If a leave of absence is requested for physical or mental health reasons, a qualified and appropriate healthcare professional must provide a letter justifying the request. A similar letter justifying the student's readiness to return after a granted leave is required.

At the end of a granted leave of absence, all courses completed will be credited with the exception of preclinical-didactic and technique courses which may require repeating. Incomplete courses must be completed or repeated if indicated prior to advancement in the program. Preclinical-didactic and technique skills must be demonstrated as adequately retained by relevant clinical departments. Preclinical courses must be repeated successfully in order to receive credit and advancement in the academic program. Students who are on conditional reinstatement provisions are ineligible for leave of absence.

**Return from Leave.** A written request to return to the college following a granted leave of absence is required. (This correspondence must be provided to the College Office of Admissions and Records and a copy provided to the Dean of the School of Dentistry not less than two months prior to the date of anticipated return.) Exception may be granted for maternity, military duties, or other short-term leave.

Students will be accepted for return at the beginning of class periods (semesters) only and will not be allowed to return after the close of the registration period of any semester.

## **Evaluation and Student Performance**

Department chairs and course coordinators, and the Clinical Dean establish the examination and grading policies for examinations and all additional forms of student evaluation in the School of Dentistry courses and clinics. These policies are distributed as part of each course syllabus. At the completion of each course, each student enrolled in the course is evaluated by the faculty and course coordinator. Each student is awarded a letter grade for the course. The letter grades correspond to the A, B, C, P or F system.

## **Academic Performance and Progress**

The student's performance and subsequent progress is evaluated at mid-semester and at the end of the semester. These evaluations are based on departmental reports submitted to the Student Evaluation, and Academic Performance Committee (SEAPC) of the School of Dentistry. Each student is informed of his/her progress in each didactic course and clinic and advised in writing of deficiencies. Each clinical department has established criteria for clinical competency (clinical experiences), and standards of adequate performance (see Clinic Manual). Based on the evaluation of the student's performance and progress in each area, a grade is assigned at mid-semester. At the end of the first semester, final letter grades are assigned at the end of the semester when the course ends.

The SEAPC consists of course coordinators, department chairs, the Associate Dean for Academic Affairs, the Associate Dean for Student Affairs, and the Associate Dean for Clinical Affairs. There are two Committees: SEAPC I/II and SEAPC III/IV. The SEAPC meets on a regular basis, minimally at mid semester, at the semester end, and at the end of the summer session, to monitor student performance. This evaluation committee, after careful review of each student, makes recommendations to the Dean relative to student status, academic progress and other student related issues. The deliberations may include recommendations for counseling, intervention, student support, or other student needs. Students may also be referred to the Academic Support Service personnel for additional academic support, e.g. test taking skills, time management, and stress management.

Official grades for courses taken during a semester are provided to the students by the Office of Admissions and Records at the end of each semester.

## **Unsatisfactory Academic Performance**

If a student receives one or more failing grades, the Evaluation Committee shall recommend appropriate action in keeping with the academic regulations adopted in the Academic Policies and Procedures manual.

## **Satisfactory Academic Progress**

In order to attain and/or maintain good academic standing, a student enrolled full-time must satisfy the following conditions:

1. The student must be registered and enrolled in a course load that meets a minimal number of credit hours (fifteen (15) hours) established by the School of Dentistry for full-time student status for any semester.
2. The full-time student must maintain a cumulative grade point average that meets or exceeds the minimally accepted academic standard of "C" (2.0 GPA) Part-time students (taking less than 15 credit hours) in enrichment programs must also meet or exceed the minimally accepted cumulative grade point average (GPA) for the School of Dentistry in courses in which they are enrolled. Each

student must maintain a minimum grade point average of "C" (2.0 GPA). A student who has a GPA below "C" (2.0 GPA), is automatically placed on academic probation.

## **Academic Probation**

A student with a semester or cumulative GPA below a "C" (2.0 GPA) will be automatically placed on academic probation. A student who is unsuccessful on the National Dental Board Examination Part I for three attempts will be dismissed with the right to appeal.. A student on academic probation is not eligible to hold student leadership positions.

## **Academic Citations**

All citations for outstanding performance in the School of Dentistry are issued by the Awards Committee. Students cited for excellence who have performed at an outstanding level during the academic year are nominated for citation by the appropriately involved faculty.

## **Dean's List**

A student is eligible for the Dean's List if he/she performs at an exemplary level consistent with the achievement of a cumulative GPA of 3.50 and above during an academic year.

## **Honor Graduates**

The SEAPC faculty recommends to the Dean, students for graduation with honors based on the student's scholastic record over the four years of the academic program. A minimum cumulative GPA of 3.50 is required for graduation with honors.

Honors, prizes, and awards are recommended by the Awards Committee. This committee processes awards based on stated criteria of the Donor, the Department, the Dental School, and the College.

## **Auditing**

Students in the School of Dentistry may be required by the Dean, Associate Dean Academic Affairs or SEAPC to audit one or more courses previously passed based on academic performance. The students must be officially registered to audit. The 80% required attendance policy as described in subsequent pages of this document applies to audited courses. Auditing students must participate in and complete all phases of an audited course at a passing level. In the event of an unsatisfactory audit, the student will be dismissed for poor academic performance.

## **Withdrawal from a Course**

To withdraw from a course, a student must first obtain approval from the appropriate Instructor/Department Chairperson and Associate Dean for Academic Affairs, and Student Affairs of the School of Dentistry. The written approval must then be filed by the student in the Office of Admissions and Records of the College. Only at this point will the student's name be deleted from the official class roster.

A student may not withdraw from a School of Dentistry course unless unusual or extenuating circumstances beyond the student's control make it extremely difficult to complete the course. The form may be obtained from the Office of Admissions & Records.

## **Withdrawal from Meharry Medical College**

A student may withdraw from Meharry Medical College after filing an official Withdrawal Form with the Office of Student Affairs and Enrollment Management, and then having the form properly executed by the Office of Records. The student's total performance in all courses will be evaluated at the time of the requested withdrawal in accordance with the policies of the School. Based on the review of the student's performance, he/she may be dropped from the College for poor academic performance. Grades for completed courses shall be recorded on the official transcript. Should the student seek to return to Meharry Medical College following withdrawal, a formal application must be filed with the Office of Enrollment Management and the regular application process followed, for admission to the School of Dentistry.

## **School of Dentistry Academic Calendar 2012-2013**

First Year Orientation/Registration	Mon., June 25 – Thurs., June 28, 2012
MAPS Classes Begin	Fri., June 29, 2012
4 <sup>th</sup> of July Holiday	Wed., July 4, 2012
MAPS Classes End	Fri., August 3, 2012
First Year Classes Resume	Mon., August 6, 2012
All Returning Students Registration (DDS2-DDS4)	Mon., August 13, 2012
White Coat Ceremony	Fri., August 17, 2012
Family & Friends Weekend	Fri., Aug. 17 – Sat., Aug. 18, 2012
Fall Break	Thurs., Aug. 30 – Fri., Aug. 31, 2012
Labor Day Holiday	Mon., September 3, 2012
Constitution Day	Mon., September 17, 2012
Convocation	Mon., October 15, 2012
Thanksgiving Holiday	Thurs., Nov. 22 – Fri., Nov. 23, 2012
Fall semester ends	Fri., December 14, 2012
Clinics Close	Mon., December 17, 2012
All Grades Due in Banner/Registrar's Office	Tues., December 18, 2012
SEAPC D1 & DII and DIII & DIV	Thurs., December 20, 2012
Semester Break	Tues., Dec. 18, 2012 – Wed., Jan. 2, 2013
Spring Classes Begin	Thurs., January 3, 2013
ML King Remembrance Program	Fri., January 18, 2013
ML King, Jr. Holiday	Mon., January 21, 2013
Dental MATCH Day	Mon., January 28, 2013
Dental MATCH Day Reception	Friday, February 1, 2013
Mobley-Singleton Lecture	Friday, February 1, 2013
ADEA/AADR	Sat., March 16 – Tues., March 19, 2013
Spring Break	Mon., March 18 – Fri., March 22, 2013
Dental Research Day	Mon., March 25, 2013
Turpin Memorial Lecture	Thurs., March 28, 2013
Good Friday – Meharry Holiday	Friday, March 29, 2013
Trial Schedules due to Registrar	Wed., April 10, 2013
Adopt-A-Grandparent Program	Friday, April 12, 2013
Clinic Ends – Seniors	Friday, April 26, 2013
Senior Grades Due in Banner	Wed., May 8, 2013
SEAPC DIII-DIV (Seniors Evaluation Only)	Friday, May 10, 2013

1 <sup>st</sup> Year Classes End	Friday, May 10, 2013
Deadline for 4 <sup>th</sup> year students to petition Financial Aid for extension of enrollment period beyond Commencement	Fri., May 10, 2013
1 <sup>st</sup> Year Grades Due in Banner (didactic grade)	Mon., May 20, 2013
Clinics Closed for Commencement	Mon., May 20 – Fri., May 24, 2013
Commencement	Sat., May 18, 2013
Memorial Day Holiday	Mon., May 27, 2013
Summer Session Begins & Dental Clinics Reopen	Tues., May 28, 2013
1 <sup>st</sup> Year Clinics End	Fri., June 28, 2013
1 <sup>st</sup> Year Clinic Grades due in Banner	Wed., July 10, 2013
2 <sup>nd</sup> & 3 <sup>rd</sup> Year Clinics End	Fri., July 12, 2013
2 <sup>nd</sup> & 3 <sup>rd</sup> Year Grades Due in Banner	Fri., July 19, 2013
SEAPC DI & II and DIII & DIV	Wed., July 24, 2013

### Calendar Summary by Class

MAPS/DDS1	Mon., June 25, 2012 – Fri., August 3, 2013
DDS1	Mon., August 6, 2012 – Fri., June 28, 2013
DDS2	Mon., August 13, 2012 – Fri., July 12, 2013
DDS3	Mon., August 13, 2012 – Fri., July 12, 2013
DDS4	Mon., August 13, 2012 - Fri., May 18, 2013**

\*\*4<sup>th</sup> Year students have until June 28, 2013, to complete all cases to be eligible to receive May diploma. Any 4<sup>th</sup> year student who anticipates not being complete with all degree requirements by Commencement must contact Financial Aid by May 10, 2013.

## Financial Information

### Tuition and Fees

Tuition and fees are set annually by the Board of Trustees and are subject to review and change without further notice.

The School of Dentistry tuition and fees for the 2012-2013 academic year are as indicated below:

Tuition	Freshman	Sophomore	Junior	Senior
<b>Tuition</b>	<b>\$42,235.00</b>	<b>\$42,235.00</b>	<b>\$42,235.00</b>	<b>\$42,235.00</b>
<b>Total fees</b>	<b>\$12,077.00</b>	<b>\$20,377.00</b>	<b>\$10,377.00</b>	<b>\$ 6,917.00</b>
<b>Total Tuition and Fees</b>	<b>\$54,312.00</b>	<b>\$62,612.00</b>	<b>\$52,612.00</b>	<b>\$49,152.00</b>

This Chart does not include expenses for room and board, books & supplies, transportation, and miscellaneous expenses. For additional information regarding these expenses, please contact the Office of Financial Aid.

### Scholarships

A Scholarship file is maintained in the School of Dentistry in the Office of Student Affairs. The file is updated frequently to keep students informed of available scholarships.

Recipients of Scholarships, with the exception of the incentive scholarships, are selected by the Awards Committee (AC) for the School of Dentistry. This committee is composed of Faculty and representatives from academic affairs. The scholarships are as follows:

**Incentive Scholarships.** These awards are granted to selected Dental students entering with undergraduate grade point average (G.P.A) of 3.50 (B) or above. This scholarship is renewable each year based upon maintaining an academic G.P.A. of 3.50 or above. Recipients are selected by the Admissions Committee Chair in consultation with the Dean.

**Cumulative Academic Scholarships.** These awards are granted to second, third, and fourth year Dental students who have maintained a cumulative academic grade point average (G.P.A.) of 3.50 or above in the designated academic year. They are determined by fund availability. The AC awards these scholarships.

**Academic Achievement Scholarships.** These awards are granted to students with an academic G.P.A. of 3.50 or above in the designated academic year. The number of scholarships awarded each year is determined by fund availability. The AC awards these scholarships.

**American Dental Association (ADA).** A selected number of ADA Endowment Scholarships are awarded annually to Dental students. The National Awards are classified into two categories- underrepresented minority students and the general student population. The AC selects students who will compete for these awards.

**National Dental Association Foundation- Colgate-Palmolive Scholarships-** These awards are granted to underrepresented minorities. Second, third and fourth year students are selected for the award. Recipients are selected by the National Dental Association.

## **Military Scholarships**

Branches of the U.S. Military and National Public Health Service Corps offer student scholarships. Obligatory service requirements are associated with scholarship awards. Telephone numbers for these programs are listed below.

- National Health Service Corps (NHSC) and Commissioned Officer Student Training and Extern Program (COSTEP), 1-800-221-9393
- U.S. Air Force (615) 298-5487 – local
- U.S. Army (615) 874-5006 – local
- U.S. Navy (615) 332-0755 – local or 1-800-334-4394

## **Honors and Awards**

**Convocation Awards.** These are presented to students at various levels for outstanding didactic and clinical performance. Students are selected by the AC based on criteria of the donor and procedures and policies established by the School and the College.

**Commencement Awards.** These are presented to graduating senior students for outstanding didactic and clinical performance. Students are selected by the AC based on criteria of the donor and procedures and policies established by the School and the College.

## **Lectureships**

The following lectures are presented annually by the School of Dentistry.

**Allen/Watson Lecture.** This annual lecture and program honors Dr. William H. Allen and Dr. William H. Watson. Dr. William H. Allen is a former Dean of the School of Dentistry and Professor Emeritus in the Department of Restorative Dentistry (Prosthodontics Division). Dr. William H. Watson is Professor Emeritus in the Department of Restorative Dentistry (Operative Division). (inaugurated 1981).

**Mobley-Singleton Lecture.** This lecture and program honors Dr. Eugenia L. Mobley, former Dean of the School of Dentistry and former Chairperson of the Department of Preventive Dentistry and Community Health, and Dr. J. B. Singleton, former Professor and Chairperson of the Department of Oral Maxillofacial Surgery, for dedicated service and leadership to the School of Dentistry, Meharry Medical College, the Nashville Community, Local, State and National organized dentistry (inaugurated 1992).

**The S. O. Banks, Jr. Lecture.** This annual lecture and program honors Dr. S. O. Banks, Jr., Professor in the Department of Oral and Maxillofacial Surgery (inaugurated 1988).

**Turpin Memorial Day.** This annual lecture and program honors Dr. Donley H. Turpin, a pioneer in the School of Dentistry who was a Professor of Prosthodontics and the first Black Dean of the School of Dentistry. This celebration is co-sponsored by Omicron Omicron Chapter of the Omicron Kappa Upsilon (OKU) National Honor Dental Society. At this time, newly elected OKU members from the graduating senior class are presented to the assembly (inaugurated 1947). Honorary and faculty OKU members are also inducted at this time.

**Occupational Safety and Health Administration (OSHA).** This seminar is required for all students at each level of the academic program (freshman, sophomore, juniors, and senior years).

All classes and clinics are cancelled to allow for mandatory student and faculty attendance at these special programs of the School and College.

## Course Descriptions

### BASIC SCIENCES

**MICRO 302-01 - *Dental Microbiology*** - This course is required for students enrolled in the School of Dentistry. It is presented with special emphasis on its relation to dental pathology and dental practice. Laboratory exercises are designed to supplement the didactic aspects of the course and to acquaint the student with the basic techniques involved in the isolation and identification of pathogenic organisms. Principles of sterilization, disinfection, immunity, antibiosis and transmission of disease are stressed both as separate entities and in their applied aspects throughout the course. The course is offered during the second (fall) semester of the freshman year. **(5 Credit hours)**

**ANAT 326-01 – *Dental Neuroscience*** - The goal of the course is to provide the freshman dental students with fundamental knowledge regarding the structure and function of the nervous system. The major areas are Neuroanatomy and Neurophysiology of the sensory systems including special senses, motor systems, autonomic nervous system and higher brain functions. The course is designed to enhance student performance on internal and external National Board Dental examinations and to provide a platform for life-long learning. The course is offered during the second (spring) semester of the freshman year. **(3 Credit Hours)**

**PHYS 321-01 – *Physiology*** - The course provides the first-year dental students with a fundamental knowledge of the structure and function of the human body. The major areas involve physiology of cells, muscle, cardiovascular, respiratory, renal, gastrointestinal, endocrine and reproductive systems. It is designed to provide adequate instruction, which enhances student performances on both internal and external National Dental Board examinations while providing a platform for life-long learning as a competent dentist. The course is offered during the second (spring) semester of the freshman year. **(5 credit hours)**

**PATH 321-01 – *Biology of Diseases*** - The aim of this course is to provide dental students with an understanding of the structural and physiological changes underlying disease processes. The major components of this course are microscopic anatomy, dental histology and general pathology. The initial component of the course deals with basic cellular histology and pathological processes. The major part of the course is presented in an organ-system-approach. For each system, the normal histology followed by the major pathological processes is presented. The aim is to introduce dental students to diseases as manifestations of disordered function and to begin thinking in term of the pathophysiologic basis of disease. In relevant areas, the impact of disease processes on the management of a dental patient is presented. The course provides the necessary instructions that enhance students' performances on examinations and the platform for life-long learning. The course is offered during the second (spring) semester of the freshman year. **(8 credit hours)**

**BICH 321-01 – *Dental Biochemistry*** - This is a basic course in cellular and functional aspects of biochemistry offered to students enrolled in the School of Dentistry. This course covers aspects of the biology of gene expression, chemistry and metabolism of carbohydrates, lipids, proteins, nucleic acids, as well as the roles of enzymes, vitamins, hormones and other factors involved in the control of cellular function. Special topics include acid-base balance, blood chemistry and metals that are relevant to the practice of dentistry (Pb, Hg, Se, etc.). Special efforts are made to provide clinical correlation for the materials presented as well as to provide discussions in conference and small group sessions. The major goal is to foster the understanding of the impact of biochemical principles on disease processes and the clinical management of dental patients. The course is offered during the first (fall) semester of the freshman year. **(4 credit hours)**

**ANAT 322-01 – *Gross Anatomy & Embryology*** - This is a basic course in the gross structure of the human body. Students working in small groups dissect a human cadaver. Didactic and clinically oriented lectures are supplemented by prosections of a cadaver, audiovisual teaching programs, radiologic presentations and surface anatomy orientation. Clinical correlations are made through periodic patient-oriented presentations. Concepts of structure, functional correlations and mechanisms of development are presented through didactic and clinically oriented lectures, audiovisual aids and periodic clinical correlations. These activities enhance the students' endeavors to reach an understanding of human micro- and ultra structure that is requisites for correlating structure and function. While special attention is given to the head and neck, this is a comprehensive anatomical course. The course is offered during the first (fall) semester of the freshman year. **(8 credit hours)**

**PHAR 411-01 – *Pharmacology*** - The pharmacological basis of therapeutics is presented by means of lectures, clinical conferences, problem-solving exercises and demonstrations. Emphasis is placed on factors governing the absorption, distribution, metabolism and the mechanism of action of drugs. Attention is paid to therapeutics, toxicology, and prescription writing. The course is offered during the first (fall) semester of the sophomore year. **(8 credit hours)**

**The following course is offered by the Department of Family and Preventive Medicine:**

**PDNT 322-01 – *Applied Nutrition*** - The primary focus of this first year course is on the concepts of human nutrition, their relevance and application to clinical dentistry. The nutritional complications of major chronic diseases are presented. Students participate in classroom

exercises designed to provide familiarity with dietary and nutritional assessment methodologies.  
**(1 credit hour)**

## CLINICAL SCIENCES

### DEPARTMENT OF ENDODONTICS

#### **Objectives (Endodontics):**

Endodontics is the branch of dentistry concerned with the morphology, physiology, and pathology of the human dental pulp and periradicular tissues. Its study and practice encompass the basic and clinical sciences, including biology of the normal pulp, the etiology, diagnosis, prevention, and treatment of diseases, and injuries of the pulp and associated periradicular tissues.

The teaching of Endodontics interrelates with the biomedical sciences. The entire curriculum strives to integrate Evidence Based Treatment into all didactic and clinical experiences. Emphasis is placed on developing departmental interrelationships within each clinical discipline to maximize comprehensive patient care. Delivery of Endodontics treatment in a clinical environment is closely integrated with all other health disciplines.

#### **Objectives (Oral Diagnostic Sciences)**

Oral Diagnostic Sciences provides instruction in oral medicine, oral and maxillofacial pathology, and radiology. Third and fourth-year dental students rotate through an Oral Diagnosis and Radiology Clinic where they learn to apply skills in diagnosis, treatment planning, and radiographic techniques.

## COURSE DESCRIPTIONS

**EDPR 301-01 – *Endodontics Lecture Course*** - This first year Endodontics, emphasis will be placed on developing protocols based on Evidence Based Treatment. Each phase of instruction will encompass the latest and most relevant scientific articles in Endodontics. The 5 basic concepts of outcome studies, biologic basis, physical material characteristics, clinical experience, financial and cultural issues in assessing patient needs will be addressed. The interrelationships between the various clinical disciplines will be emphasized throughout the course. **(2 Credit hours)**

**EDPR 431-01 - *Endodontics*** - This second year Endodontics core course is designed to introduce the student to Endodontics techniques under simulated conditions on a number of extracted teeth and plastic blocks. The goal of the pre-clinical course is to train the student to perform the mechanical aspects of Endodontics therapy. This course will provide the student with a functional exposure of basic information relative to the practice of clinical Endodontics. During all phases of the course, emphasis will be placed on correlating the basic and clinical sciences. While the majority of the course covers clinical skills, biology of the normal and irreversibly injured pulp will be taught.-Included in this course will be preclinical knowledge and skill in the differential diagnosis of pain of pulpal and/or periapical origin, as well as referred pain; the control of pain emanating from the pulp or periapical region; and treatment by pulp capping, or pulpotomy as well as by pulpectomy. The student will also be introduced and trained to use electronic apex locators and rotary instrumentation. **(4 Credit hours)**

**EDPR 591-01 - *Advanced Concepts in Endodontics*** - This third year course has been designed to expand on concepts introduced in the prerequisite EDPR-431-01 and to transfer those concepts to patient care. The course prepares the junior student to diagnose, assess and

treat Endodontics cases in the clinic. This is accomplished by expanding diagnostic concepts introduced in the core Endodontics course and basic Endodontics knowledge in the following areas: (1) diagnostic instruments and their use; (2) Endodontics surgery; (3) Endodontics pharmacology; (4) microbiology and immunology; (5) Endodontics emergencies, including traumatic dental injuries; (6) periodontal/Endodontics lesions; (7) prognosis and evaluation of success. **(1 Credit hour)**

**EDPR 591-01 and EDPR 641-01 - *Endodontics Clinic*** - Successful completion of the sophomore Endodontics core course and the junior clinical entrance examination is needed to establish the student's clinical eligibility to treat patients in the Endodontics clinic. The clinical entrance examination is comprised of two parts: (a) clinical activity and (b) diagnostic competency. The clinical activity is measured by completion of the "manikin exercise," which is intended to closely simulate the treatment of an actual patient without the need for anesthesia. The diagnostic competency section consists of performing a series of diagnostic tests and procedures on a classmate. **591-01 (1 Credit hour), 641-01 (12 Credit hour)**

The student will be exposed to some of the new technology of Endodontics, such as rotary instrumentation, digital radiography, electronic apex locators to name a few. Each student will participate in case presentations, which entails a formal presentation of an Endodontics case completed in the clinic. The student will self-evaluate his or her treatment and defend all modalities of treatment in the Endodontics case presentation. In addition, student will recall previously treated cases in order to determine prognosis and success of treatment rendered.

**ORDG 420-01 *Medically Compromised Patient***- This second year course provides a student to recognize, diagnose, manage, and treat patients with systemic diseases in the dental office. Common medical conditions are discussed which include etiology, incidence, prevalence, complications, laboratory findings, and clinical presentation of these entities. Students learn the importance of referrals and consultations with various healthcare providers concerning medically compromised patients. **(2 credit hours)**

**ORDG 421-01 - *Oral Diagnosis & Radiology*** - This first & second year course presents radiobiologic theory and physical properties of ionizing radiation and describes the application of radiographic methods in dental practice, radiation safety, and normal radiographic anatomy. Advanced oral and maxillofacial imaging techniques and interpretation, emphasizing deviation from normal, are also introduced. **(2 credit hours)**

**ORDG 502-01 *Oral and Maxillofacial Pathology***- This third year course provides a comprehensive and detailed study into the vast array of pathological conditions that affect the head and neck region with emphasis on the oral cavity. Students will learn the etiology, prevalence, clinical/radiographic presentation and histology of each entity. Topics include biopsy techniques, vesiculo-bullous lesions, odontogenic/non-odontogenic tumors and cysts, benign and malignant epithelial lesions including salivary gland, benign and malignant mesenchymal lesions, staging systems of malignancies, and adverse effects on the oral cavity from radiation and chemotherapy treatment. Emphasis is placed on formulating a reasonable differential diagnosis and when to refer patients for a biopsy. **(4 credit hours)**

**ORDG 520-01 *Introduction to Clinical Dentistry***-This third year course is designed to allow a smooth transition from didactic courses to clinical experiences. The student will be exposed to proper medical/dental history taking, performing extraoral/intraoral examinations, and radiographic examinations that include interpretation and diagnosis of radiographs. The student will be familiar with clinical protocol as indicated by the various clinical departments and student clinical handbook. The student will become familiar with the AxiUm computer system and its components. The student will be introduced to all materials necessary for evaluation and interpretation of a patient's condition and situations as well as develop skills to be comfortable with patient interaction. **(2 credit hours)**

**ORDG 571-01 & 671-01 - *Oral Diagnosis and Radiology Clinic*** - Through participation in this third and fourth year clinic, students learn to apply skills in history taking, clinical examination and radiographic evaluation. Students independently compose an appropriate treatment plan, which is presented in both written and verbal form. Students are questioned concerning material presented and are required to write a work authorization for a removable prosthesis. **571-01 (1 credit hour) 671-01 (2 credit hours)**

**ORDG 630-01 - *Treatment Planning Council*** - This third and fourth year course provides a forum whereby students, after applying skills of history taking, clinical examination, and radiographic evaluation, independently compose an appropriate treatment plan, which is presented in both written and verbal form. **(1 credit hour)**

## **DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY**

### **Objectives**

The Department of Oral and Maxillofacial Surgery, School of Dentistry, Meharry Medical College, is committed to the mission of the SOD. In addition, the department is committed to continuously providing quality controlled didactic and clinical instruction in oral and maxillofacial surgery to all enrolled undergraduate students. This instruction will produce a graduate capable of providing competent, routine independent oral and maxillofacial surgical care; recognition of challenges beyond their skill levels; performing competently on national, state and regional board examinations; and ultimately excelling in the private practice of general dentistry.

### **COURSE DESCRIPTIONS**

**ORSG 403-01 - *Principles of Oral and Maxillofacial Surgery I*** - This second course is designed to give the student an introduction to oral surgery techniques and exodontia with a review of local anesthesia techniques including the study of biochemistry, pharmacology, and physiological aspects of local anesthetic agents. Students will review regional anatomy to enhance techniques of injection and will be provided instruction in basic oral surgery techniques and exodontia. Students are required to demonstrate competence in exodontia techniques as well as management of complications associated with oral surgery procedures. Lectures, slides, videotapes and demonstrations on patients will be used. **(2 credit hours)**

**ORSG 502-01 - *Principles of Oral and Maxillofacial Surgery II*** - This third year course is designed to teach the students more advanced principles of Oral & Maxillofacial Surgery to include surgical technique, Pre-operative physical evaluation of the patient, surgical complications and emergencies, management of disease, injuries and defects of the oral and paraoral structures. Additionally, students will be reacquainted with the anatomy of the head and neck, microbiology and other basic science subjects that will enhance their clinical capabilities. Lectures will be supplemented by slides, videotapes and demonstrations. **(4 credit hours)**

**ORSG 503-01 - *Principles of Oral and Maxillofacial Surgery III*** - This third year, two semester hour course is designed to introduce the student to the fundamental principles of general anesthesia, methods of evaluation of patients, selections of agents, and the indication for techniques. The related principles of conscious-sedation techniques will be stressed, with specific emphasis on the use of nitrous oxide and oxygen. Lectures, slides, videotapes and clinical demonstrations will be used. **(4 credit hours)**

**ORSG 531-01 - *Oral Surgery Clinic (Junior)*** - This fourth year clinical course is designed to permit students to demonstrate proficiency in performing uncomplicated extractions of erupted teeth and minor oral surgery procedures, competence in performing uncomplicated biopsy of hard and soft tissue lesions and surgical extraction of impacted and un-erupted teeth. The student is

expected to apply the principles taught in the didactic courses: Principles of Surgery, Pain Control I and II, Cardiopulmonary Resuscitation, to meet the patient's needs at chair-side. This is a two semester hour course. (**1 credit hour**)

**ORSG 621-01 - *Oral Surgery Clinic (Senior)*** - This fourth year, two semester hour clinical course is designed to permit students to demonstrate competency in performing uncomplicated extractions of erupted teeth and minor oral surgery procedures. The student will gain competence in performing uncomplicated biopsy of hard and soft tissue lesions and surgical extraction of impacted and unerupted teeth. The student is expected to apply to the patient's needs at the chair-side the principles taught in the didactic courses: Principles of Surgery, Pain Control I and II, and Cardiopulmonary Resuscitation. The students will also become competent in administration of nitrous-oxide inhalation sedation. (**2 credit hour**)

**ORSG 492-01 AND ORSG 692-01 - *Cardiopulmonary Resuscitation (CPR)*** - This second and fourth year, one semester hour course is designed for certification and re-certification of students in cardiopulmonary resuscitation. The course consists of lectures and demonstrations in the techniques of cardiopulmonary resuscitation. Experience in monitoring vital signs will be gained as part of the exercises by the students. Each student must demonstrate competency in the performance tests for airway obstruction in infants and adult victims and resuscitation of infant and adult victims of cardiac arrest. This course complies with standards of the American Heart Association and the American Red Cross. (**1 credit hour**)

**ORSG 600-01 - *Advanced Interdisciplinary Implantology*** - This fourth year, one semester hour course is designed to acquaint dental students with the basic concepts of dental implantology. Topics will consider the cellular aspects (biologic, physiologic and histologic) phenomena of osseointegrated dental implants. Concepts will include the surgical and restorative aspects of implantology. Students will be taught the basic concepts to restore a dental implant with a single unit fixed restoration and how to stabilize a mandibular overdenture using two dental implants. (**1 credit hour**)

**ORSG 620-01 - *Orthodontics Seminar*** - This fourth year, one semester hour course combine brief lectures, formal oral case reports, literature review, and directed discussion on clinical techniques and problems in oral and maxillofacial surgery in order to gain additional experience in some of the most advanced areas of oral and maxillofacial surgery; organize and present a case for a patient in need of comprehensive oral and maxillofacial surgery care; and to familiarize students with the scientific literature in the field of oral and maxillofacial surgery. (**1 credit hour**)

## DEPARTMENT OF ORTHODONTICS

### Objectives

This division is actively involved in introducing and teaching basic orthodontic theory and principles. The students are introduced to basic philosophy and current concepts in the field of orthodontics. A great emphasis is placed on differential diagnosis, case selection, treatment planning, and patient management. Each student is required to participate in patient treatment and gain clinical experiences in limited orthodontic tooth movement by developing treatment strategies for preventive, interceptive and limited orthodontic problems.

### COURSE DESCRIPTIONS

**ORTH 422-01 - *Orthodontics*** - This second year course is designed to introduce the student to the history, concept, and rationale of orthodontic therapy. The student is familiarized with human growth and development, with emphasis placed on the craniofacial complex. The etiologic factors of malocclusion are characterized and elucidated. The student is introduced to orthodontic diagnostic aids and their interpretation in preparation for clinical orthodontic diagnosis and

treatment planning. The laboratory phase of this course includes impression making, fabrication of orthodontic models, and exercises in the design and construction of appliances commonly used in interceptive and limited corrective orthodontics. **(2 credit hours)**

**ORTH 521-01 – *Orthodontics*** - This third year course is designed to advance the students' knowledge of orthodontics and further prepare them for clinical activity. The physical and psychological effects of malocclusion are described and delineated. This course covers biomechanical principles of tooth movement, as well as preventive, interceptive, limited corrective, and surgical orthodontics. The students gain clinical experience in patient management related to preventive, interceptive, and limited corrective orthodontics. **(1 credit hours)**

**ORTH 651-01 – *Orthodontics Clinic*** - This fourth year course provides a review of topics covered in the two previous orthodontic courses in preparation for Part II of the National Board Dental Examination. This review covers diagnosis and treatment planning, cephalometrics, biomechanics, preventive and interceptive orthodontics, etc. The students are also introduced to the latest concepts, especially those commonly employed by general practitioners. **(2 credit hours)**

**ORTH 531-01 - *Orthodontic Clinic*** - This third year course provides instruction and clinical experience in treating limited orthodontic problems. Emphasis is placed on diagnosis, treatment planning, and treatment strategies for preventive, interceptive and limited orthodontic cases. **(1 credit hour)**

## DEPARTMENT OF PEDIATRIC DENTISTRY

### Objectives

The educational goals of the Department of Pediatric Dentistry are to enable the dental student, at the undergraduate level, to develop a strong competency in pediatric dentistry and to increase the theoretical and clinical judgment, technical skills, and case organizational abilities. The course of study in pediatric dentistry is designed to establish a high standard of oral care based on an appreciation of the intricacies and demands of comprehensive health. The division stresses a strong scientific and behavioral science foundation, strong patient assessment skills, disease control and rehabilitation effectiveness, and a strong appreciation for health promotion. Minimal expectations of students to assure demonstrated competencies are emphasized in:

- Preventive services and treatment of conditions to include plaque control, patient education, and emergency treatment of pain and infection.
- Restoration of the primary and permanent teeth to proper form and function, with careful consideration for the health of the pulp and the supporting structures.
- Maintenance and/or restoration of space in the dental arch to achieve or retain adequate esthetics and function.
- Recognition of malocclusion, with priority provided for interceptive services as well as recognition of disfiguring and/or handicapping malocclusions.

## COURSE DESCRIPTIONS

**PEDN 412-01 - *Pediatric Dentistry*** - Lecture/Laboratory. This second-year introductory course is designed to introduce the basic principles of clinical pediatric dentistry, including growth and development, restorative dentistry, space maintenance, and some general considerations necessary when treating the pediatric dentistry patient. Laboratory exercises will be used to familiarize the student with actual pediatric dentistry techniques. **(2 credit hours)**

**PEDN 511-01 - *Pediatric Dentistry*** - This third year major didactic course offered in pediatric dentistry offers extended didactic exposure to patient management, caries management, preventive measures, oral surgery, pulp therapy, trauma management, space maintenance, radiographic techniques, medicine, care of the handicapped, nutrition and orthodontics. **(1 credit hours)**

**PEDN 541-01 - *Pediatric Dentistry Clinic*** - This third year course is designed to provide instruction and experience in clinical pediatric dentistry. Emphasis is placed on diagnosis, treatment planning, and the comprehensive management of common pediatric dentistry situations. Community dentistry and health promotion exercises also are included in this course. **(1 credit hour)**

**PEDN 641-01- *Pediatric Dentistry Clinic*** - This fourth year course is an extension of the third year clinical course. Additional emphasis is placed on emergency management, medical complications, care for the handicapped, and treatment in the hospital. **(1 credit hour)**

## DEPARTMENT OF DENTAL PUBLIC HEALTH

### Objectives

For dental health professionals to effectively anticipate, assess, initiate, or respond to change they require skills in population-based analysis and knowledge about health service delivery systems, the financing of health services, basic health, and research design.

The pre-doctoral curriculum includes:

- The sociology and psychology of dentistry
- The epidemiology of oral conditions
- Health policy and the planning of oral health services
- The organization and delivery of care to patient populations with special needs
- Knowledge and Skills in Interpersonal Communication
- Needs Assessment and Treatment Planning
- Consultative and Inter-professional Relations
- Quality Assurance
- Coordination of Dental Team Responsibilities
- Principles of Proactive Management
- Cultural Competency

## COURSE DESCRIPTIONS

**PDNT 303-01 - *Introduction to Clinical Research*** - This first year class introduces students to the principles of Biostatistics and Epidemiology. This course is concerned with how to find scientific information necessary to sustain and enhance the clinical practice of dentistry and how to interpret that information. In this context, scientific information refers to the published results of clinical research among humans, which provides the rationale for understanding, preventing and treating oral diseases in dental practice and the community. **(1 credit hour)**

**PDNT 310-01 - *Introduction to Practice Management*** - This course has been designed to acquaint the first year dental student with basic concepts that will provide insight into the business and management side of dentistry. We will raise issues relating to basic problems of dental practice as well as provide the students with a formula for success. The course also provides for a community-based mentoring program. The purpose of the program is to expose students to the extramural practice of dentistry in order for them to experience the dental profession from the perspective of the private practitioner. Students are exposed to real-life

practice situations and learn to deal with the emotional, financial and social aspects of dentistry and patient care. (1 credit hour)

**PDNT 322-01 - *Applied Nutrition*** - The primary focus of this first year course is on the concepts of human nutrition, their relevance and application to clinical dentistry. The nutritional complications of major chronic diseases are presented. Students participate in classroom exercises designed to provide familiarity with dietary and nutritional assessment methodologies. (1 credit hour)

**PDNT 401-01 - *Introduction to Community Based Education*** - This second year course introduces the student to dental public health. This course will also provide the sophomore dental student with the basic principles in promotion, improvement and maintenance of oral health. In addition, students will participate in community outreach programs. (1 credit hour)

**PDNT 411-01 - *Cultural Competency in Healthcare*** - This second year course is designed to help students understand theories and skills that prepare them to become culturally competent members in their communities. Emphasis will be placed on the acquisition and promotion of skills, attitudes, behaviors, and knowledge necessary for students to work respectfully and effectively with patients and each other in a culturally diverse environment. (1 credit hour)

**PDNT 501-01 - *Practice Management*** - This third year course presents information that is essential to establishing or purchasing a dental practice or joining an existing practice as an associate or partner. Models of solo practice, group practice, partnership practice and associateship practice are discussed. Topics are presented that assist in the development of the management skills necessary to operate a dental practice successfully. Personnel management, office design, financing, jurisprudence, managed care organizations, estate planning, business and cost accounting are discussed. (1 credit hour)

**PDNT 521-01 - *Behavioral Management in Dental Practice*** - This third year course is designed to provide students an opportunity to develop communication skills for interacting appropriately with patients, peers, and other health care professionals. Students will develop oral, written, and non-verbal communication skills and an understanding of psychological needs of patients. (1 credit hour)

**PDNT 522-01 - *Community Dental Health*** - This third year course focuses on the basic concepts of dental public health as related to the community. The history of dentistry, principles of fluoride and sealant usage, epidemiology of oral diseases and cancer, HIV/AIDS, OSHA guidelines, current issues in health care, social policy and health care economics are discussed. Models of health care delivery systems and quality assurance are presented. The course teaches basic skills in the data collection and interpretation of population-based and community-based surveys and programs. (2 credit hours)

**PDNT 561-01 - *Geriatric Dentistry*** - This multidisciplinary and interdisciplinary third year course focuses on the oral diagnosis and treatment planning for the older adult. It prepares the student with the essentials of how to evaluate the geriatric patient including the physical, mental, pharmacological, and socioeconomic aspects of assessment. Oral assessment, enhanced by actual case studies, is presented so that the student will have an understanding of various therapies that are necessary to accomplish the delivery of dental care to the older adult. Ethical issues in geriatric health care and elder abuse will also be discussed. (1 credit hour)

## DEPARTMENT OF RESTORATIVE DENTISTRY

### Objectives

The Department of Restorative Dentistry (Operative and Prosthodontics) presents the concepts and principles that prepare the graduate to deliver dental health care for the restorative dental patient. The department presents the biomechanical and clinical principles necessary to restore the oral cavity to optimum health. Students receive instruction in dental biomaterials, pre-clinical restorative procedures involving caries detection and removal, cavity design, choosing restorative materials, operative dentistry and fixed and removable prosthodontic concepts. The department also correlates the diagnoses and treatment of caries, trauma or pathosis of the dentition as it relates to the various basic sciences and other disciplines of dentistry. Students are also instructed on the restoration of the occlusion. A vital part of the discipline of Prosthodontics, occlusion encompasses the anatomical, physiological, and bio-mechanical relationships of the total masticatory system, the restoration and reproduction of occlusal relationships to their proper function in the system, and the examination procedures that allow proper diagnosis and treatment of the pathologic or dysfunctional states.

### COURSE DESCRIPTIONS

**PROS 412-01 - *Removable Partial Dentures*** - This second year course teaches students the principles necessary for utilization of removable partial dentures. Students are exposed to diagnosis and treatment planning for the partially edentulous patient, with emphasis being placed on prognosis with various treatment modalities. Students gain experience in diagnosis and treatment planning, mouth preparation, impression techniques, survey, design, tooth arrangement, delivery and post-operative care of removable partial dentures. Laboratory procedures and dental materials related to removable partial dentures are reviewed. Students are exposed to concepts that relate other specialty areas to removable partial dentures, such as elective endodontics, fixed prosthodontic abutment preparation, pre-prosthetic surgery, and periodontal considerations. **(3 credit hours)**

**PROS 422-01 - *Complete Dentures*** - This second year course is designed to explore and discuss the biological principles related to the fabrication and function of a complete denture prosthesis used to rehabilitate completely edentulous patients. Emphasis is placed on thorough examination, recognition of the problems, and how to make a diagnosis, treatment plan, and prognosis for each patient in a clinical setting. Textbooks, lectures, demonstrations, audio-visual aids, and discussions of the clinical aspects are used to broaden the scope of relative biological and technical knowledge. By the end of the course students gain the thorough, step-by-step, technical know how of the fabrication of complete dentures. **(4 credit hours)**

**PROS 491-01 - *Fixed Prosthodontics*** - This second year course presents the basic principles to prepare dental students for pre-clinical crown and bridge procedures, as well as provides a foundation for students to grasp principles of clinical crown and bridge procedures. It gives students general knowledge in fixed prosthodontic treatment planning, crown preparations and prosthesis fabrication. At the completion of this course, students should be able to fabricate a fixed partial denture that satisfactorily meets the requirements of biomechanics and promotes the health of the remaining oral structures. Textbooks, lectures, demonstrations, audio-visual aids, along with discussions of the clinical aspects are used to broaden the scope of relative biological and technical knowledge. By the end of the course, students gain the thorough, step-by-step, technical know-how of the fabrication of fixed partial dentures. **(6 credit hours)**

**PROS 501-01 - *Fixed Prosthodontics II*** - This third year course presents biological and clinical principles to prepare students to restore existing teeth and replace missing teeth, when possible, by means of fixed prosthodontic restorations. The lecture series presents basic principles of crown preparations (specific for porcelain to metal restorations, fabrication of provisional

restorations, cast dowel posts, pin retained cores, and the chemical nature of porcelain, color and esthetics in fixed prosthodontics). All clinical procedures presented in lecture will be supplemented by laboratory exercises to prepare the student to perform the procedures in a clinical situation. **(6 credit hours)**

**PROS 521-01 - *Junior Dental Clinics*** - This third year course is designed to introduce the student to clinical treatment of the dental patient. Basic prosthodontic treatment modalities are completed by students to integrate the knowledge base gained in the pre-clinical courses with clinical treatment of patients. Students are guided in the diagnosis, treatment planning, and comprehensive care for the edentulous, partially edentulous, and dentate patient. **(7 credit hours)**

**PROS 621-01 - *Prosthodontic Dental Clinic*** - This fourth year course is designed to provide additional clinical experiences for students. Student are guided in the diagnosis, treatment planning, and comprehensive care of more advanced cases to both complete their clinical experiences and develop a basic level of competency to deliver prosthodontic dental health care. Several competency-based clinical exercises and examinations are conducted in fixed and removable prosthodontics. **(4 credit hours)**

**PROS 511-01 - *Occlusal Adjustment*** - This third year course emphasizes biological and clinical principles in the preparation of students for diagnosing and treatment planning for psychological, pathological, and physiological problems related to the gnathostomatic system. Laboratory training in the application of occlusal treatment, instrumentation and procedures for occlusal adjustment are also taught in this course. **(1 credit hours)**

**ASDD 410-01 (Sophomore), ASDD 501-01 (Juniors ) ASDD 602-01 (Seniors) – *Analytical Reasoning and Critical Thinking (ARCT)*** – The Analytical Reasoning and Critical Thinking course is designed to teach students how to evaluate what they hear in lectures and/or read in textbooks in dentistry. The course enables students to raise and answer important questions involved with self-deception. They are taught to distinguish between fact and opinion and to decide which ideas to examine closely during examinations. The difference lies between those students who merely see or hear words and those who see beyond words, achieving a higher level of reasoning and comprehension.

**ASDD 410-01 (1 credit hour) ASDD 510-01 (1 credit hour)**

**ASDD 602-01 (1 credit hour)**

**OPDN 321-01 - *Introduction to Operative Dentistry*** - This first year course is designed to teach students to apply the biological, mechanical and esthetic principles, necessary to recognize dental caries and perform proper tooth preparation. **(2 credit hours)**

**OPDN 401-01/401-01 - *Pre-Clinical Operative Dentistry*** - This second year technique course is designed to give the sophomore dental student a basic background in the biological and manipulative fundamental principles of operative dentistry and make available the opportunity to practice these principles utilizing the various dental protective liners, bases and restorative materials for replacing lost tooth structure as a result of caries or trauma. **(14 credit hour)**

**OPDN 421-01 - *Biodental Materials Seminar*** - This second year course presents the basic chemical and physical properties of dental materials as they relate to their manipulation by the dentist. It is intended to bridge the gap between the knowledge obtained in the basic courses in materials science, chemistry, and physics and the dental operatory. **(1 credit hour)**

**OPDN 501-01 - *Operative Dentistry Seminar*** - This course is designed to acquaint the junior student with clinical procedures and regulations; to relate, review and reinforce the knowledge gained in the pre-clinical Operative Dentistry course and the sophomore Biomaterials course to clinical practice; to teach students to distinguish between decayed and normal tooth structure; to aid students with patient management; and to teach additional material and techniques not

covered in the sophomore course in Operative Dentistry. Prerequisite: OPDN 402 - OPDN 403. (2 credit hours)

**OPDN 531-01 - *Junior Operative Clinic*** - This third year course is designed for the clinical practice of operative dentistry. The major objective is to give the student practice in diagnosis, treatment planning, and comprehensive restorative care for the patient possessing all or part of the natural dentition. Prerequisite: OPDN 402 -OPDN 403. (7 credit hours)

**OPDN 631-01 - *Operative Clinic*** - This fourth year course is designed for the clinical practice of operative dentistry. It involves the continuation of patient treatment with more advanced procedures than the junior year. Prerequisite: OPDN 531. (7 credit hours)

## DEPARTMENT OF PERIODONTICS

### Objectives

The mission of the Department of Periodontics is to train pre-doctoral students in the art and science of periodontology. The Department provides pre-doctoral dental students with laboratory, pre-clinical and clinical instruction in diagnosis, treatment and prevention of periodontal disease.

### COURSE DESCRIPTIONS

**EDPR 421-01 - *Periodontics*** - This two semester pre-clinical course is offered in the sophomore year. Students are introduced to the principles of periodontal disease diagnosis, treatment and prevention through lectures and laboratory, and clinical practice sessions. Students work in teams of two practicing examination and treatment techniques in the clinic to build the skills necessary to treat patients. (2 credit hours)

**EDPR 511-01 - *Periodontics*** - This two semester didactic course is offered in the junior year. The course focuses on non-surgical and surgical periodontal therapy of various forms of periodontal disease. (EDPR 421 -01 is a prerequisite for this course.) (1 credit hours)

**EDPR 523-01 and 621-01 - *Periodontics Clinic*** - In the junior and senior year, students treat patients in the clinic under the supervision of faculty. A high student-faculty ratio is maintained to ensure that each student develops the skills to treat gingivitis, and early and moderate periodontitis. Students also assist with surgical therapy to foster a familiarity of various surgical techniques. EDPR 523-01 (3 credit hours) EDPR 621-01 (3 credit hours)

## DEPARTMENT OF ORAL BIOLOGY AND RESEARCH

### Objectives

The mission of the Department of Oral Biology and Research is to bridge Basic Sciences and the Dental clinical practice through research excellence and to educate dental scientists for academic and research leadership positions. Recent advances in basic sciences, the completion of the human genome project, the advancement of genomics and proteomics as well as the interdisciplinary nature of research in oral health and disease processes and treatment, are key to position the department as a leader in the national effort to relate these findings to systemic health, and to translate these advances into improved dental care and oral health especially as they relate to the health of underserved populations and the elimination of oral health disparities.

## DIVISION OF GRADUATE PROGRAMS

### **Objectives**

The Division of Graduate Studies is committed to establishing graduate training in the recognized specialty areas of dentistry and general practice. The program will prepare the residents to challenge the American Board in their recognized specialty area or similar certification in general dentistry. The training of the postgraduate residents will be consistent with the mission of Meharry and the SOD.

### **Advanced Training**

The Division of Graduate Studies is committed to conducting graduate training in the recognized specialty areas of Dentistry and General Practice. The program will prepare the resident to challenge the American Board in the recognized specialty area or provide similar certification in General Dentistry. The training of the postgraduate residents is consistent with the Mission of Meharry and the School of Dentistry.

There are currently two postgraduate programs in the School of Dentistry:

- **General Practice Residency Program.** The General Practice Residency program is a one year, accredited program that is affiliated with the Metropolitan General Hospital and the Nashville Veterans Affairs Hospital. The program provides the residents the opportunity to treat a diverse group of patients and gain experience in managing patients in outpatient treatment and hospital inpatient settings. This program provides the opportunity for residents to acquire additional training and experience in all phases of general dentistry while serving an underrepresented population in dental healthcare.
- **Oral and Maxillofacial Surgery Program.** The Oral and Maxillofacial Residency program is a four year, accredited program that trains residents in the full scope of oral and maxillofacial surgery. Resident training is both an inpatient and outpatient service of the School of Dentistry, Metropolitan General Hospital and the Nashville Veterans Affairs Hospital. Residents receive a certificate after successfully completing the program and are eligible to apply for American Board Certification by examination.

### **Continuing Dental Education**

The dental education program is organized to promote a continuous learning process in the profession. The pursuit of continuous education is fostered in the academic program through continuing education programs and special lectures. The Lifelong Learning course is equivalent to sixteen (16) clock hours. Students must earn a minimum of thirteen (13) clock hours of lifelong learning each year. Attendance at these programs is mandatory for all students. All students must attend eighty percent (80%) of the required programs to complete the Lifelong Learning Course successfully. A record of attendance at these programs is maintained by the Director of Continuing Education for the School of Dentistry and the Associate Dean for Academic Affairs.

These programs provide the opportunities to invite outstanding academicians and clinicians to the School and to the College to present lectures in areas of contemporary interests and concerns in education, research or clinical practice. They also provide the opportunity for faculty and students to interact with these visitors in an atmosphere of tradition and history. Questions from Heritage Lectures are included in appropriate departmental examinations.

In addition, the School of Dentistry along with the College's continuing education program conducts several dental education courses each year for students, alumni, and other dental healthcare professionals as a part of lifelong learning in the dental profession.

# School of Dentistry Faculty

## Department of Dental Public Health

**Chairperson:** Sharon Cater, D.D.S., Associate Professor  
**Associate Professors:** Jacinta Leavell, B.S., M.S., Ph.D.; Machelle Thompson, A.S., R.D.H., B.S., M.S.P.H.  
**Assistant Professor:** Thomas D. Luten, M.A.

## Faculty with Secondary Appointment:

**Assistant Professor:** Keydron Guinn, Ph.D.

## Department of Endodontics

**Chairperson:** Robert M. Block, D.D.S., M.S., FACDS, Associate Professor  
**Associate Professor:** Kathy L. Jefferson, D.D.S., M.S.  
**Adjunct Assistant Professors:** Jan-Nee Sheats-Mathis, D.M.D.; Jimmy B. Sheats, II, D.M.D.

## Department of Oral Biology and Research

**Chairperson:** Pandu Gangula, PhD  
**Professor:** Hau Xie, D.D.S., M.S., Ph.D.

## Department of Oral and Maxillofacial Surgery

**Chairperson:** Charles D. Albury, Jr., D.M.D., Assistant Professor\*  
**Professor:** Charles W. Williams, B.S., D.D.S.\*  
**Associate Professor:** Leslie Halpern, M.D., D.D.S., Ph.D., M.P.H.\*  
**Assistant Professor:** Ralph Grossheim, Jr., D.D.S.  
**Adjunct Associate Professor:** Robin R. Daniel, D.D.S.\*\*  
**Adjunct Assistant Professors:** Joseph Doctora, D.D.S., M.D.\*; Walter J. Jung, D.D.S.\*; George Lockett, D.D.S.

\*Diplomate American Board of Oral Maxillofacial Surgery

\*\* Diplomate American Board of Forensic Dentistry

## Department of Oral Diagnostic Sciences

**Chairperson:** Gibson Johnson, Jr., B.S., D.D.S., Associate Professor  
**Assistant Professors:** Walter Owens, D.D.S.; Jeffery B. Price, D.D.S., M.S.

## Faculty with Secondary Appointment:

**Professor:** Billy R. Ballard, M.D., D.D.S.\*

\*Diplomate American Board of Oral Pathology

## Department of Orthodontics

**Chairperson:** Sandra G. Harris, D.D.S., Associate Professor  
**Adjunct Associate Professor:** Shyam Malhotra, D.D.S.

## Department of Pediatric Dentistry

**Chairperson:** Kristen A. Darville, D.D.S., Ph.D., Assistant Professor\*  
**Assistant Professor:** Tawana K. Ware, D.D.S., M.S.D.  
**Professor Emeritus:** Edwin H. Hines, D.D.S.

\*Diplomate American Board of Pediatric Dentistry

**Department of Periodontics**

**Chairperson:** Gurbajan Singh, B.D.S., M.P.A., Associate Professor

**Department of Restorative Dentistry**

**Chairperson:** James Tyus, D.D.S., Professor

**Associate Professors:** William Davis, D.D.S., M.S.P.H.; Daphne Ferguson-Young, D.D.S., B.S.; Roosevelt S. Smith, D.D.S., B.S.; Gregory Stoute, D.M.D., M.P.H.; Henry Young, D.D.S., M.S.

**Assistant Professors:** Eric Carter, D.D.S.; Shawna Chesser, D.D.S.; Norma Coleman, D.D.S.; Ethel Harris, D.D.S.; Harold Jackson, B.S., D.D.S.; Suzette Stines, D.D.S.

**Adjunct Assistant Professors:** Don M. Lunn, D.D.S.; Ray B. Fossick, D.D.S.

**Division of Graduate Programs**

**Program Director** – Oral and Maxillofacial Surgery Residency: Leslie R. Halpern, M.D., D.D.S., Ph.D., M.P.H.

**Program Director** – General Practice Residency Program: Daphne Ferguson-Young, D.D.S., M.S.P.H.

**SOM Basic Science Cross-School Core Teaching Faculty****Department of Biochemistry and Cancer Biology:**

**Professors:** Salil K. Das, Ph.D. (Biochemistry); Maria de Fatima Lima, Ph.D. (Microbiology)

**Department of Microbiology and Immunology:**

**Chairperson:** Fernando V. Villalta, Ph.D., Professor (Microbiology, Immunology)

Professors: Etheleen Hill, Ph.D. (Microbiology); Robert G. Holt, Ph.D. (Microbiology)

**Department of Neuroscience and Pharmacology:**

**Professors:** Sanika Chirwa, Ph.D. (Dental Neurosciences); Sukhbir S. Mokha, Ph.D. (Dental Neurosciences, Pharmacology)

**Associate Professor:** Twum-Ampofo Ansah, Ph.D. (Dental Neurosciences, Pharmacology)

**Department of Pathology:**

**Chairperson:** Billy R. Ballard, M.D., D.D.S., Professor (Biology, Dental Neurosciences)

**Associate Professors:** Cecil W. Cone, M.D. (Biology); Digna Forbes, M.D. (Biology)

**Department of Physiology:**

**Professor:** Zhongmao Guo, Ph.D. (Physiology)

**Assistant Professor:** Eun-Sook Lee, Ph.D. (Dental Neurosciences)

**Department of Professional and Medical Education:**

**Chairperson:** George A. Breaux, M.D., Associate Professor (Biology, Physiology)

**Vice-Chairperson:** Arthur J. Jackson, Ph.D., Professor (Gross Anatomy, Dental Neurosciences)

**Professors:** Emmanuel Atta-Asafo-Adjei, Ph.D. (Biochemistry); Mohit Bhattacharyya, Ph.D. (Physiology); John T. Clark, Ph.D. (Physiology); Susan A. DeRiemer, Ph.D. (Embryology); Mohammed A. Maleque, Ph.D. (Pharmacology); Alfred M. Nyanda, Ph.D. (Pharmacology); Linda Sander, Ph.D. (Physiology)

**Associate Professors:** Carol Freund, Ph.D. (Genetics), Shyamali Mukherjee, Ph.D. (Pharmacology), Olugbemiga B. Ogunkua, M.D., Ph.D. (Anatomical Sciences)

**Assistant Professor:** Anita Austin, Ph.D. (Gross Anatomy)

**Professor Emeriti:** Mukul Banerjee, Ph.D. (Physiology), Dolores C. Shockley, Ph.D. (Pharmacology)

# **School of Graduate Studies and Research**

## **Administration**

**Maria de Fatima Lima, Ph.D.**, Dean

**Evangeline Motley-Johnson, Ph.D.**, Associate Dean

**Christine Minja-Trupin, Ph.D.**, Program Evaluator

**William Washington, D.P.A., M.P.A., M.P.H.**, Director, Master of Science in Public Health

**Steven Wolff, M.D.**, Director, Master of Science in Clinical Investigation

**John Murray, M.D.**, Co-Director, Master of Science in Clinical Investigation

**Keydron Guinn, Ph.D.**, Director, Health Policy Certificate Program

## **Graduate Studies and Research Education at Meharry**

The School of Graduate Studies and Research (SOGSR) is recognized as a valuable national resource for educating PhD's in the biomedical sciences, Masters-level graduates in Public Health (MSPH) and graduates of Masters in Clinical Investigation (MSCI). More recently, a Health Policy Certificate Program has been added to the Graduate School. Since 1970, Meharry has conferred more than 10 percent of the PhD degrees awarded nationally to African Americans in all of the biomedical sciences. Graduates of the School serve on the faculties of America's best universities as well as in leadership roles for many of the nation's health, pharmaceutical, and biomedical technology corporations.

The divisions that participate in the graduate programs are housed on three floors of the West Basic Sciences Center and in the Clinical area. The Center provides some 280,000 square feet of teaching, laboratory, and office space. Each division has a seminar room, a library, small group meeting facilities, faculty laboratories, and offices. The building also houses shared seminar rooms, large lecture halls, and central research core facilities including an animal care facility; a molecular biology core facility that contains a DNA sequencer, an oligonucleotide synthesizer, an Amgen densitometer; an Affymetrix gene array facility; a flow cytometry laboratory; a Biological Safety Level 3 (BL3) facility; a behavioral neuroscience facility which includes an optical animal activity monitoring system, a Morris water maze as well as Y and Radial arm mazes; a molecular neurobiology core and a neurohistological laboratory.

### **History of the School**

The School of Graduate Studies and Research at Meharry Medical College began in 1938 as a series of short courses in the basic and clinical sciences. In 1947, a Master of Science Degree program was implemented as the first graduate degree, a Ph.D. program was established in 1972, and an M.D. /Ph.D. program in 1982. The Ph.D. program has graduated more than 180 PhDs in the U.S. and currently is the top producer of African-American Ph.D.s in the Biomedical Sciences in the U.S. The Master of Science in Public Health Program at Meharry Medical College was established in 1974 and graduated its first class of one student in 1978. To date, the program has graduated more than 300 professionals who occupy positions of leadership in many public and private sectors of the country. The Master of Science and Clinical Investigation, established in 2004, has graduates who are at the forefront of clinical and translational research. The Health Policy Certificate Program was established in March 2010 as a collaborative effort between the SOGSR and the Robert Wood Johnson Foundation Center for Health Policy.

### **Mission of School**

The School of Graduate Studies and Research strives to provide unique educational opportunities in basic biomedical research and clinical investigation training and public health service to promising African Americans and other under-represented ethnic minority students through outstanding basic, clinical, and public health oriented research with special emphasis on serving the underserved communities and in diseases and health conditions that disproportionately affect ethnic minority populations. The Certificate Program was established to increase students' marketability for employment opportunities in the health policy arena.

## **Objectives of the Academic Program**

Upon completion of the Graduate Program, our graduates will:

1. Know current biomedical science and public health, and their historical context, with special emphasis on the diseases and conditions that affect underserved communities.
2. Be prepared to conduct original research: design appropriate experiments, be experts in techniques of life, clinical sciences and public health, and think scientifically and analytically.
3. Be able to translate basic science and public health to address problems of health and society; work collegially; communicate effectively verbally, in writing, and graphically and practice the highest ethical and professional standards.
4. The graduates of the Certificate Program will be more marketable for employment opportunities.

Our graduates will be creative and confident in exploring new areas and opportunities.

## **Research**

The goal of the training programs in the Graduate School is to translate knowledge from the bench (Ph.D. program) to the bedside (Master in Clinical Investigation) to the community (Master of Science in Public Health). Research is the vehicle that supports training in all of these programs. Currently, investigators in the Basic Science Departments are involved in research in Biochemistry and Cancer Biology, Cardiovascular Biology, Microbiology and Immunology, and Neuroscience and Pharmacology and train in the Biochemistry and Cancer Biology, Microbiology and Immunology, Neuroscience and Pharmacology Ph.D. training programs. The PhD programs are designed to be broad, comprehensive, creative, individualized, and integrated to maximize each student's opportunity to develop a strong foundation in the basic sciences. Research supporting the programs leading to the Master of Science in Clinical Investigation translates basic findings into applicable knowledge to patients and their health outcomes. Current clinical areas of research are Women's Health, Cancer, Sickle Cell Disease, and HIV-AIDS. At Meharry, our mission is to inform and engage the community to address diseases and health conditions that disproportionately affect ethnic minority populations; research leading to the Master of Science and Public Health addresses access to health and health care, cancer epidemiology, behavior and beliefs affecting treatment and compliance of cancer as well as other diseases and the health of our communities.

## **Academic Programs**

### **Doctoral Program**

The Doctor of Philosophy degree opens the door to a career of research and discovery. It also leads to positions of broad responsibility in government, industry, and the academic world. Yet, the motive that drives scientists is not the desire for fame and wealth, prestige or power. Instead, it is curiosity, the unremitting desire to understand how the natural world works. If you share that desire, then you will find our graduate program challenging and exciting. We at Meharry believe these enterprises cannot reach their fullest capacity for human excellence until they draw upon the intellectual resources of all segments of the population. The doctoral program at Meharry leads to the interdisciplinary PhD in biomedical sciences with major emphasis in biochemistry and cancer biology, microbiology and immunology, neuroscience and pharmacology.

The doctoral program is divided into core, major emphasis, and dissertation phases. The core phase occupies the first year of study; all students enroll in courses defined as the core curriculum courses. These courses include general biochemistry, cell and molecular biology, and

laboratory rotations as well as scientific communications, bioethics and molecular biology. Students may be exempted from core courses by passing examinations prepared by the instructors for each course.

During the major emphasis phase, students complete advanced courses and begin research in one of the following areas: biochemistry and cancer biology, microbiology and immunology, neuroscience and pharmacology. The major emphasis phase ends when the student passes comprehensive examinations, thereby designating the student a candidate for the PhD degree. Students must be candidates for the degree no later than the spring semester of their third year. During the dissertation phase, the student completes the research begun during the major emphasis phase and writes a dissertation on the research.

To be granted the doctoral degree, the student must either publish or have accepted for publication a manuscript as first author in a peer-review journal, as well as present a public seminar on the dissertation research and pass an oral examination testing his or her knowledge of the methodologies and findings of the dissertation project.

### **Combined MD/PhD Program**

The MD/PhD program is offered jointly by the School of Medicine and the School of Graduate Studies and Research. The program trains leaders in academic medicine by providing education in medicine and immersion in a research program of excellence. Successful completion of the program leads to the MD and PhD degrees.

Students considered for admission to the combined degree program must meet the admission requirements of both the medical and graduate schools. Students enrolled in the MD/PhD program matriculate in the School of Medicine for the first two years of their training. After successful performance on the United States Medical Licensing Exam (USMLE) Part I, students began their research training inclusive of graduate level courses. Once the PhD requirements are successfully completed, inclusive of publishing a manuscript and successfully defending a dissertation, students re-enter their medical studies and complete the medical school curriculum.

### **Master of Science in Public Health Program (MSPH)**

The Master of Science in Public Health (MSPH) is offered by the Division of Public Health Practice, School of Graduate Studies and Research. The MSPH degree program is committed to training students who seek optimal health for people, and their communities. The MSPH program supports the World Health Organization's definition of health: "a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity."

Students in the MSPH program receive a foundation in the basics of public health that allows them to work as health professionals in the public, private, and voluntary health agency sectors at the local, state, federal, and international levels. Graduates of the program work in diverse settings in health fields, which are / are not involved in the direct provision of health care.

While in the graduate program, students participate in externships, which have included the U.S. Centers for Disease Control, Department of Veterans Affairs, Blue Cross/Blue Shield, Tennessee Hospital Association, and the American Cancer Society. These externships lead to excellent opportunities for future employment.

### **Master of Science in Clinical Investigation Program (MSCI)**

The Clinical Research Education and Career Development (CRECD) program at Meharry Medical College offers a two-year fellowship for Physicians and other doctoral-level care

professionals leading to a Master of Science for Clinical Investigation (MSCI) degree. The program's ambitions are to expand the cadre of well-trained clinical researchers, particularly minorities, and foster careers in clinical investigation that will address racial and ethnic health disparities.

The curriculum has two major tracks: 1) Patient Oriented and 2) Epidemiology/Health Service research. The program's curriculum includes core didactic, elective and experimental design sessions for clinical research training that spans the spectrum of translational science ranging from molecular medicine to epidemiology to qualitative research providing fundamental skills and methodology required by well-trained independent clinical investigators. Courses are offered at both Meharry Medical College and Vanderbilt University. Each trainee, during the first year, will develop a research project and establish a mentoring committee composed of faculty from both Meharry and Vanderbilt. The mentoring committee will review the project and assist the trainee in design and implementation. Each trainee will conduct the research trial and analyze the data to present a seminar and prepare a research paper.

The program offers tuition, book allowances, supplies and partial salary support along with resources to conduct clinical trials. Program candidates must be doctoral candidates, or have a doctoral degree, and be able to have sufficient time to commit to the course of studies.

## **Master in Health Sciences**

The Master in Health Sciences Program is a 30 credit, one-year, pre-professional master's degree program geared to students who desire to enter into a professional degree program. The program is designed to provide increased academic strength to pre-professional students. While there is no guarantee that completion of this program will lead to acceptance to health professional school, successful matriculation in this program will enhance competitiveness for admission. The program is highly intense in its coursework.

## **Health Policy Certificate Program**

The Health Policy Certificate Program is an interdisciplinary program that features some of the leading academicians and experts from a number of the country's top health policy institutions and organizations. It was established as a collaborative effort between the SOGSR and the Robert Wood Johnson Foundation's Center for Health Policy. Students who complete the certificate program will have a better understanding of the intricacies involved in the making of policy, the interconnectedness of society/societal change and will ultimately affect policy decisions. Additionally, the certificate will be an asset to those who are interested in becoming scholars in health policy research.

## **Admissions**

The SOGSR Admissions Committee has the responsibility to review all applications for admission and full authority to accept or reject any applicant. The committee is charged with the responsibility of selecting students who will make suitable candidates for graduate studies. The number of applicants greatly exceeds the capacity, and all applicants are considered on a competitive basis from the standpoints of scholarship, intelligence, aptitude, character, and general fitness to meet the historic mission of the college. The dean, SOGSR, (hereafter referred to as the dean) sends a letter informing the applicant of the committee's decision. This correspondence constitutes the only official and binding notice of acceptance or rejection. An applicant also may be admitted to the graduate program as a special student, auditing student, or with conditional admission.

## Applications

The Office of Admissions and Recruitment processes all applications to the PhD and MSPH Programs of the School of Graduate Studies and Research (SOGSR). To be considered for admission as a regular student an applicant must have a complete application. A complete application consists of the following: (1) an application form properly filled out; (2) official transcripts from all colleges the applicant has attended; (3) letters of recommendation from two college instructors in the sciences (for the doctoral program) or two persons who are qualified to assess your work or academic performance (for the MSPH program); (4) a report of the applicant's scores on the Graduate Record Examination and (5) an essay focused on the applicant's academic strengths and career plans.

## Procedures for Admission

The deadline for all applications is March 15 of the year of anticipated matriculation. There is no application fee to apply.

## Requirements for Admission

**PhD Program:** To be admitted to the PhD Program, the applicants must:

- Hold a bachelor's, master's, or advanced degree from an accredited college or university
- Have an overall B average and a B average in science courses
- Submit scores from the General Test of the Graduate Record Examination; ***the admissions committee will not review any student application until it receives official GRE scores***
- International students must submit TOEFL scores and any education received outside the U.S. must be evaluated by World Education Services
- Submit two letters of recommendation from college instructors in the natural sciences
- Submit an essay that describes their academic background, career plans and reasons for pursuing graduate studies

The admissions committee places great emphasis on recommendations. If you have worked on a research project at your undergraduate school or at a major research center, you should ask your research advisor for a recommendation. The admissions committee will give careful consideration to your essay. If you have conducted research, describe the specific problem you investigated, the methods you used to study it, the results you obtained and the conclusions you drew from these results.

**MD/PhD Program:** To be admitted to the MD/PhD Program, the applicants must:

- Be accepted in the School of Medicine
- Have an overall B average and a B average in science courses
- Submit scores from the Medical College Admissions Test and/or Graduate Record Examination
- Submit two letters of recommendation from college instructors in the natural sciences
- Submit a research interest statement
- Participate in a personal interview

**MSPH Program:** To be admitted to the MSPH Program, the applicants must:

- Hold a bachelor's, master's or advanced degree from an accredited college or university
- Have an overall B average and a B average in science courses
- Submit scores from the General Test of the Graduate Record Examination; ***the admissions committee will not review any student application until it receives official GRE scores***

- Submit two letters of recommendation from college instructors in the natural sciences
- International students must submit TOEFL scores. International students who received education outside the U.S. must have their academic record evaluated by the World Education Services
- Submit an essay that describes their academic background, career plans and reasons for pursuing graduate studies

It is the applicant's responsibility to have a report of his/her performance on the Graduate Record Examination transmitted to the Office of Admissions. The test must have been taken within five years of the proposed matriculation date.

**MSCI Program:** To be admitted to the MSCI Program, the applicants must:

- Submit a Curriculum Vitae
- Submit three letters of recommendation
- Submit a description documenting commitment to clinical research
- Submit a research plan of 2-3 three pages describing specific research interests (if developed) or areas of interest for consideration of future research projects
- Submit a statement of how this proposed research plan fits into long-term career objectives
- Have a MD, PhD or equivalent professional degree
- Be a U.S. citizen or permanent resident to be eligible to receive NIH funding

Applications to the MSCI Program are submitted directly to the Director of the program.

**MHS Program:** To be admitted to the MHS Program, the applicants must:

- Have a bachelor's degree from an accredited institution, with a GPA of 3.0.
- Have applied to Meharry's Medical or Dental Schools to be considered for this program.

## **Special Student**

A person may be admitted by the SOGSR Admissions Committee as a special student to take one or more courses, after obtaining permission from the Dean. Special students are not candidates for degrees at Meharry, but are governed by the same scholastic regulations as regular students. An interview is required with the chairperson of the department where the courses are to be taken. Fees are pro-rated in accordance with the number of hours that the course offers.

## **Conditional Admission**

Conditional admission status may be assigned to an applicant with deficiencies in the quality of admission materials submitted; however, the applicant's conditional status must be recommended by the degree program and approved by the Graduate Admissions Committee. For conditionally admitted students to qualify for regular status, a minimum cumulative grade point average of 3.0 (B), with no grades lower than a "B" in core courses, must be earned during the academic year in which the first 24 graded hours of graduate course work are completed for the doctoral program and 12 hours for the master's program. (Degree programs may specify additional requirements for students granted conditional admission status.) If regular status is not achieved during the first year, the student will be dismissed from the degree program and the SOGSR.

All correspondence concerning admissions should be addressed to the Office of Admissions, Meharry Medical College, Nashville, Tennessee 37208. Each applicant must meet the specific requirements of the School of Graduate Studies and Research.

## **Readmission**

An application for readmission must be made to the Director of Admissions and must be approved by the Admissions Committee. The applicant must meet all requirements in force at the time of submission. Students not enrolled in the Graduate School for two consecutive semesters must reapply for admission. Students who have been dropped from the rolls of the College are eligible for reconsideration only under extenuating circumstances.

## **Transfer Course Credit**

**Doctoral Program:** After a doctoral student begins the major emphasis phase, he or she may petition his or her department to receive credit for graduate work done at other accredited institutions or from Meharry for courses taken before admission to the SOGSR-provided that the total number of credits transferred for core courses and advanced courses does not exceed nine (9) credits. Grades earned on transferred work must be equivalent to a "B" or better. Dissertation credit is not transferable. The department chairperson requests in writing that the Office of Records enter the credits on the student's Meharry transcript. Grades earned in courses at other schools, prior to admission to Meharry are not included in computations of a student's average nor entered on the Meharry transcript. However, grades earned at Meharry before the student matriculates (e.g., bridging, joint programs, etc.) are computed in the student's GPA.

**Masters of Science in Public Health Program:** Students enrolled in the MSPH Program may receive transfer credit after approval by the Division Director. Up to six credit hours of MSPH course work may be transferred.

**Masters of Science in Clinical Investigation Program:** Trainees enrolled in the MSCI program may receive transfer credit after approval by the Director. Up to eight credit hours of MSCI course work may be transferred.

## **Courses Not Eligible for Transfer Course Credit**

Correspondence or extension courses cannot be transferred for credit. Course(s) taken on a pass-fail or satisfactory-unsatisfactory basis are not eligible for transfer credit. Course credit earned in professional school, such as law, medicine, divinity or dentistry may not be transferred for graduate degree purposes. Exceptions from this rule are courses cross-listed as graduate school courses which carry graduate credits at the institution where taken. Students seeking the MS or PhD in addition to the MD or DDS degree may receive graduate credit, with approval of the graduate dean, for some of the courses taken at Meharry.

## **Enrollment Status**

A full-time student must register for a minimum of 12 semester hours during the fall and spring semesters and for a minimum of six hours during the summer semester. However, during the dissertation phase of the PhD program, a student may be considered full-time even though he or she has registered for less than 12 credit hours of dissertation research. A student in the MSPH program may be considered full-time by registering for less than 12 hours of thesis research only after being admitted to candidacy and after having completed the required course work and externship.

## **Attendance**

No student is allowed to attend a class for which he or she is not officially registered by the Office of Records. No credit is given for coursework taken before official registration. Unexcused absences in excess of 20 percent of the scheduled classes may result in a failure in the course. A

dean's excuse may be granted for personal illness, death of a close relative, financial exigencies, etc. If a dean's excuse is granted, the student will not be penalized for work missed during his or her absence from class, although departments may require make-up for the work missed. Requests for dean's excuses are made in the Office of the School of Graduate Studies and Research, and appropriate documentation is required at that time.

## **Academic Regulations**

### **Requirements for Ph.D., MSPH, MSCI**

#### **Doctoral Program**

To receive the Ph.D. degree a student must (a) complete at least 40 hours of graduate coursework; research courses do not count towards this requirement; not more than nine credit hours of graduate courses taken at other institutions may be credited toward the forty hours (grades earned in courses at other institutions prior to admission to Meharry are not included in computations of the student's average); (b) pass qualify examinations prepared by his or her major emphasis division; (c) complete a dissertation which meets the approval of his or her committee on instruction, division chair and the graduate dean; d) publish or have accepted for publication in a peer reviewed journal, a manuscript based on the dissertation research of which the student is the first author and e) successfully defend the dissertation in a public seminar. (Note: The requirements above are the minimal stipulations by the SOGSR; the major emphasis divisions may present additional requirements.)

#### **Master of Science in Public Health (MSPH) Program**

To receive the MSPH, a student must complete the required course work including an externship and either a thesis or a comprehensive examination. If the student selects the thesis option, his/her curriculum must include research courses and a thesis that meets approval of the student's thesis chairperson and committee, division director, and the Graduate Dean, which must be submitted and successfully defended prior to graduation. The completion of the curriculum consisting of 45 credit hours of approved course work, 400-hour externship and a thesis or comprehensive examination leads to the MSPH in Public Health.

Students with medical degrees, who are admitted into the Meharry Medical College General Preventive Medicine Residency or Occupational Medicine Residency programs, must apply to be admitted to the MSPH program to receive their degrees. Residency program curriculum is the same as all other MSPH students.

#### **Master of Science Degree in Clinical Investigation (MSCI)**

To receive the MSCI, a student must a) complete 36 hours of the appropriate coursework (27 hours of core curriculum instruction and 9 elective hours), b) develop and conduct original mentored research and must participate on an on-going clinical research project, c) present the research project at a local or national meeting, d) must prepare a manuscript suitable for submission to a peer-reviewed journal in the medical field and e) must have the endorsement of the mentoring committee, program director and graduate dean.

#### **Master of Health Science Degree (MHS)**

To receive the MSCI, a student must complete 30 hours of the appropriate course work.

## **Advising**

At Meharry Medical College, graduate students are part of a purposeful community in which they are challenged to understand the basics of their study be it biomedical sciences or public health. Their educational experience is directed toward serving the underserved communities and in diseases and health conditions that disproportionately affect ethnic minority populations the students are partnered with others at Meharry Medical College engaged in this mission.

The Graduate School is a caring and supportive community that encourages meaningful collaboration within and outside the College with outside individuals and institutions. There is a culture of freedom and creativity that encourages individuals to fulfill their roles with excellence within a context of purposeful work and work that serves others. Students will be challenged to pursue original research with integrity and high ethical standards. Students will also be supported in their work with academic resources, laboratory resources, computational resources, a financial stipend or financial aid and have access to the expertise of the scientists and the administration of the school.

Students will have an academic advisor throughout the period of their matriculation. In addition, depending on the student's intended degree and expected culminating experience, the student may engage other members of the faculty to form a committee on instruction (COI), thesis committee or mentoring committee, which will advise the student from the beginning of the student's program to recommending the student for the degree. A congenial and respectful student relationship with the faculty is vital to the progress of the student through graduate school and the continuing development of the student as a professional. The advisors' responsibility is to assist the students in achieving their goals in a timely manner. While the students will become acquainted with the entire faculty, the formal responsibility of advising the students resides with the designated advisors.

## **Career Counseling**

Ph.D. students are advised by their mentors, COI members, and instructors as to possible career options. The students are also given opportunities to meet with invited speakers over lunch to discuss careers. Ph.D. graduate students present their research at major scientific meetings; many scientists at these meetings attend the student's presentations and discuss postdoctoral options with the students. The students also participate in summer internships at NIH and major research institutions where they get advice for their career decisions. Every two years, Meharry Medical College and Vanderbilt University sponsor a career workshop with representatives from industry, government and private foundations to discuss career options.

Advising and career counseling are provided to MSPH students by the Academic Program administrator, designated faculty advisor, preceptors and alumni. The Academic Program Administrator is a full-time position dedicated to student advising, student career counseling and other student services. This individual helps students on matters pertaining to coursework and other academic issues such as externship opportunities and fellowship openings. Faculty, preceptors and alumni also interact with students and provide advice about careers. The Graduate School and the students run a career week every spring in which individuals in the field come to meet and lecture to students about career opportunities.

## **Examinations and Grades**

Grades for didactic courses taken for graduate credit are A, B+, B, C+, C, F, S, U, IP and I. Grades for thesis research in the Ph.D. program are S and U; grades for thesis research in the MSPH program are letter grades. Grade point averages (GPA) are calculated on the basis of A=4, B+=3.5, B=3, C+=2.5 C=2, F= 0. S and U grades are not computed into students' GPA and are not converted to A, B+, B, C+, C, or F grades when students complete the requirements for

degrees. All final grades shall remain on the student's permanent transcript. Students receiving a D grade in an off-campus course because of cross-registration will receive a grade of F.

The grade of "I" (Incomplete), indicates that the student has satisfactorily completed at least three-fourths of a course, but for legitimate reasons a small fraction of the work remains to be completed; or that the student's record indicates that he or she can obtain a passing grade, but lacks a specific requirement such as the final examination because of illness or some other unique or extraordinary circumstance beyond the student's control. A student receiving an "I" must complete the requirements for the course to remove the "I" by the end of the next semester the course is offered. If the requirements are not completed within the specified time, no credit will be given and the Office of Records will automatically record the final grade as "F".

The symbols "WV" and "WA" indicate that the student "Withdrew Voluntarily" or was "Withdrawn Administratively by the Dean." The symbols "WP" and "WF" indicate that the student "Withdrew Passing" or "Withdrew Failing," respectively. These symbols are used only when the student has withdrawn after at least six weeks of attendance in a course during the fall or spring semester or after two weeks during the summer.

The "IP" (In Progress) is awarded for certain courses that are continuous over more than one semester and, as such, are not finally evaluated until the conclusion of the sequence. Final grades are given in such courses only at the end of the final semester of the course sequence. A record of academic progression, however, shall be reported in the Office of Admission and Records at the end of any given semester using the designation In-Progress (IP). Quality points will be calculated using the total hours of the course.

## **Academic Standing**

A student must maintain an average of 3.0 to remain in good academic standing. A student whose average falls below 3.0 may be dismissed or given up to one calendar year to raise his or her average back to 3.0; during this period the student is said to be on academic probation.

A student whose average does not reach 3.0 by the end of a designated period of academic probation may be dismissed from the SOGSR per the recommendation of the Evaluation Committee and approval by the Dean. In addition, if, in the judgment of the Evaluation Committee, a student fails to make satisfactory progress towards the completion of the degree or to demonstrate sufficient promise in the discipline, the student may not be allowed to continue in the SOGSR. In any academic year, students must pass 70% of coursework (21hrs) with a grade of "B" or higher. A graduate student may become academically ineligible to continue in the SOGSR if he or she receives a grade of "F", or receives more than three grades of "C", depending on his/her academic standing. Receipt of a second "F" grade will result in automatic dismissal. If in any semester, a student enrolled in the MSPH program receives a grade of "C" in two courses, then those courses also must be repeated and a grade of "B" or better must be received in each course. When a course is repeated, the first grade is not used to determine the student's grade point average. Students are allowed to repeat a course only once.

## **Adding or Withdrawing from Course(s)**

If a student wishes to add a course(s), he or she should get the appropriate form from the Office of Records. The student is required to get the approval of their respective division chairperson and final approval from the graduate dean and return the signed approval form to the Office of Records. A student may add a course prior to the end of the 3rd week of classes and prior to the end of the 1st week of classes during the summer session. If a student wishes to withdraw from a course(s), he or she should get the appropriate form from the Office of Records. The student is required to get the approval of their respective division chairperson and final approval from the graduate dean and return the signed approval form to the Office of Records. A student may receive a grade of "W" if he/she withdraws from a course prior to the end of the 6th week of

classes during the regular semester or prior to the 2nd week of classes during the summer session. However, grades for courses progressed beyond this time period will be recorded on the official record as "WF" or "WP".

## **Leave of Absence and Withdrawal**

A Leave of Absence is an interruption of the normal course of study requested by a student and requiring prior approval by the graduate dean. A student's Leave of Absence shall not extend beyond one calendar year. The official date of leave shall not antedate the date of the student's request. An official Leave of Absence form must be processed and can be obtained from the Office of Records. A student who fails either to register or to obtain an approved Leave of Absence by the end of registration during a given semester will be regarded as having withdrawn and must apply as a new student to resume study. A Leave of Absence from the college is given only to students who are in good academic standing. Any other interruption in the normal course of study constitutes a withdrawal. At the discretion of the dean, a student may be required to take an Administrative Leave of Absence. A student who has obtained an approved Leave of Absence may return to school by informing the SOGSR in writing before the expiration of the leave. The student will be required to register during the next semester after his/her leave expires. If the student does not resume his/her program at this time, has withdrawn from Graduate School or has not registered for two consecutive semesters, he/she must also reapply to the Graduate School. Provided the student left in good standing, in these situations he/she needs only to fill out a new application (fee waived), write a statement that includes why he/she should be reinstated and have his/her former preceptor write a letter of recommendation. These documents will be reviewed by the SOGSR Admissions Committee who will then make a recommendation to the Dean.

A student in the Ph.D. program who has not been approved for a *Leave of Absence* and has not registered for two consecutive years will not be considered for reinstatement or be awarded a Ph.D. degree.

A withdrawal is a permanent cessation of graduate study. If a student withdraws, he or she must reapply to Meharry as a new student and be considered for admission by the SOGSR Admissions Committee to resume graduate work (see above). If a student receives a medical withdrawal, he or she will be required to present medical clearance before being readmitted. A student withdrawing without presenting to the director of Admissions and Records written permission from the dean forfeits all claims for credit or refund.

## **Application for Graduation**

All graduate students anticipating graduation must complete a Diploma Application Card. Cards are available during fall registration and may be picked up from the Office of Records or Student Academic Affairs. The deadline for receipt of the card is shown in the College's Academic Calendar. Provided that no use of college faculty time and/or facilities is required, a student need not be registered in the semester in which the degree is to be awarded, unless the thesis or dissertation is defended and/or submitted to the SOGSR during the same semester, since submission constitutes a significant use of College's time and facilities. Master's and doctoral degrees are awarded in May, October, and December. Formal commencement exercises are held in May.

## **Graduation Clearance**

Prospective graduates should get the Graduation Clearance Form from the dean's office and secure the appropriate signatures. However, the student must complete the following steps, prior to being issued a Clearance Form:

- Submit a letter from the divisional or divisional chairperson informing the dean that all degree requirements have been completed and submit five and four error-free copies of the dissertation or thesis for Ph.D. and MSPH students respectively
- Complete the Graduate Program Self-Assessment Student Questionnaire and return it to the dean's office
- Complete and return to the SOGSR the National Research Council Survey of Earned Doctorates (Ph.D. graduates only) and
- Complete the Exit Survey

## 2012-2013 Academic Calendar *Doctor of Philosophy – Biomedical Sciences (PhD)*

<b>Summer Registration</b>	<b>Thurs., May 24, 2012</b>
<b>Summer Session Begins (2011-2012 AY)</b>	<b>Tues., May 29, 2012</b>
<b>Summer Session Ends (2011-2012 AY)</b>	<b>Fri., July 27, 2012</b>
<b>First Year Orientation/Registration</b>	<b>Wed., Aug. 1 – Thurs., Aug. 2, 2012</b>
<b>Returning Students Registration</b>	<b>Fri., August 10, 2012</b>
<b>Classes Begin</b>	<b>Mon., August 13, 2012</b>
<b>White Coat Ceremony</b>	<b>Fri., August 17, 2012</b>
<b>Family &amp; Friends Weekend</b>	<b>Fri., Aug. 17 – Sat., Aug. 18, 2012</b>
<b>Drop/Add Period</b>	<b>Tues., Aug. 14 – Fri., Aug. 31, 2012</b>
<b>Labor Day Holiday</b>	<b>Mon., September 3, 2012</b>
<b>Constitution Day</b>	<b>Mon., September 17, 2012</b>
<b>Convocation</b>	<b>Mon., October 15, 2012</b>
<b>Last Day to Submit Thesis/Dissertation for December Diploma</b>	<b>Fri., October 26, 2012</b>
<b>Thanksgiving Holiday</b>	<b>Thurs., Nov. 22 – Fri., Nov. 23, 2012</b>
<b>Spring 2013 Pre-Registration</b>	<b>Mon., November 30, 2012</b>
<b>Fall semester ends</b>	<b>Fri., December 7, 2012</b>
<b>Grades Due in Banner/Registrar's Office</b>	<b>Fri., December 14, 2012</b>
<b>Spring Classes Begin</b>	<b>Thurs., January 3, 2013</b>
<b>Drop/Add Period</b>	<b>Thurs., Jan. 3 – Fri., Jan. 11, 2013</b>
<b>ML King Remembrance Program</b>	<b>Fri., January 18, 2013</b>
<b>ML King, Jr. Day</b>	<b>Mon., January 21, 2013</b>
<b>Student Research Day (no classes)</b>	<b>Wed., March 13, 2013</b>
<b>Student Research Week</b>	<b>Mon., March 18 – Fri., March 22, 2013</b>
<b>Spring Break</b>	<b>Mon., March 25 - Thurs., March 28, 2013</b>
<b>Good Friday – Meharry Holiday</b>	<b>Fri., March 29, 2013</b>
<b>Last Day to Publicly Defend Thesis/Dissertation</b>	<b>Mon., April 15, 2013</b>

<b>Last Day to Submit Thesis/Dissertation for May Diploma</b>	<b><i>Fri., April 26, 2013</i></b>
<b>Classes End for May grads</b>	<b><i>Fri., April 26, 2013</i></b>
<b>Grades Due for May grads</b>	<b><i>Fri., May 3, 2013</i></b>
<b>Classes End for Continuing Students/PhD Research Continues</b>	<b><i>Fri., May 3, 2013</i></b>
<b>Spring Semester Grades Due for Continuing Students</b>	<b><i>Tues., May 14, 2013</i></b>
<b>Commencement</b>	<b><i>Sat., May 18, 2013</i></b>
<b>Memorial Day Holiday</b>	<b><i>Mon., May 27, 2013</i></b>
<b>Returning Students Summer Registration</b>	<b><i>Fri., May 31, 2013</i></b>
<b>Summer Session Begins (2012-2013 AY)</b>	<b><i>Mon., June 3, 2013</i></b>
<b>Summer Session Ends (2012-2013 AY)</b>	<b><i>Fri., July 26, 2013</i></b>

**Calendar Summary by Class & Program: PhD**

First Year Entering Class                    August 1, 2012 – May 24, 2013; June 3, 2013 – July 26, 2013  
 Continuing Students        August 10, 2012 – May 24, 2013; June 3, 2013 – July 26, 2013  
 Graduating Students       August 10, 2012 – May 18, 2013

**2012-2013 Academic Calendar**  
**Master of Science – Public Health (MSPH)**

<b>First Year Orientation/Registration</b>	<b><i>Thurs., Aug. 9 &amp; Fri., Aug. 10, 2012</i></b>
<b>Returning Students Registration</b>	<b><i>Fri., August 10, 2012</i></b>
<b>Classes Begin</b>	<b><i>Mon., August 13, 2012</i></b>
<b>Professionalism Pinning Ceremony</b>	<b><i>Fri., August 17, 2012</i></b>
<b>Family &amp; Friends Weekend</b>	<b><i>Fri., August 17 – Sat., August 18, 2012</i></b>
<b>Drop/Add Period</b>	<b><i>Tues., Aug. 14 – Fri., Aug. 31, 2012</i></b>
<b>Labor Day Holiday</b>	<b><i>Mon., September 3, 2012</i></b>
<b>Constitution Day</b>	<b><i>Mon., September 17, 2012</i></b>
<b>Convocation</b>	<b><i>Mon., October 15, 2012</i></b>
<b>Last Day to Submit Thesis/Dissertation for December Diploma</b>	<b><i>Fri., October 26, 2012</i></b>
<b>Thanksgiving Holiday</b>	<b><i>Thurs., Nov. 22 – Fri., Nov. 23, 2012</i></b>
<b>Spring 2013 Pre-Registration</b>	<b><i>Mon., November 30, 2012</i></b>
<b>Fall semester ends</b>	<b><i>Fri., December 7, 2012</i></b>
<b>Grades Due in Banner/Registrar's Office</b>	<b><i>Fri., December 14, 2012</i></b>
<b>Spring Classes Begin</b>	<b><i>Thurs., January 3, 2013</i></b>
<b>Drop/Add Period</b>	<b><i>Thurs., Jan. 3 – Fri., Jan. 11, 2013</i></b>
<b>ML King Remembrance Program</b>	<b><i>Fri., January 18, 2013</i></b>
<b>ML King, Jr. Day</b>	<b><i>Mon., January 21, 2013</i></b>
<b>MSPH Graduate Week</b>	<b><i>Mon., March 11 – Fri., March 15, 2013</i></b>
<b>Student Research Day (no classes)</b>	<b><i>Wed., March 13, 2013</i></b>
<b>Student Research Week</b>	<b><i>Mon., March 18 – Fri., March 22, 2013</i></b>
<b>Spring Break</b>	<b><i>Mon., March 25 - Thurs., March 28, 2013</i></b>
<b>Good Friday – Meharry Holiday</b>	<b><i>Fri., March 29, 2013</i></b>
<b>Last Day to Publicly Defend</b>	<b><i>Mon., April 15, 2013</i></b>

<b>Thesis/Dissertation</b>	
<b>Last Day to Submit Thesis/Dissertation for May Diploma</b>	<b>Fri., April 26, 2013</b>
<b>Classes End for May grads</b>	<b>Fri., April 26, 2013</b>
<b>Grades Due for May grads</b>	<b>Fri., May 3, 2013</b>
<b>Classes End for Continuing Students</b>	<b>Fri., May 3, 2013</b>
<b>Spring Semester Grades Due for Continuing Students</b>	<b>Tues., May 14, 2013</b>
<b>Commencement</b>	<b>Sat., May 18, 2013</b>
<b>Memorial Day Holiday</b>	<b>Mon., May 27, 2013</b>
<b>Returning Students Registration</b>	<b>Fri., May 31, 2013</b>
<b>Fall Term including Externship Begins*</b>	<b>Mon., June 3, 2013</b>
<b>Externship Experience Ends</b>	<b>Fri., July 26, 2013</b>

\*Please note that beginning with the 2013-2014 academic year, the Summer Externship will mark the beginning of the second year curriculum and the Fall term.

#### Calendar Summary by Class & Program: MSPH

First Year Students	August 9, 2012 – May 3, 2013
Graduating Students	August 10, 2012 – May 18, 2013

### **2012-2013 Academic Calendar Master of Health Sciences (MHS)**

<b>Program Orientation</b>	<b>Mon., June 11, 2012</b>
<b>Classes Begin</b>	<b>Tues., June 12, 2012</b>
<b>SSEM Orientation &amp; Registration</b>	<b>Fri., June 15, 2012</b>
<b>Family &amp; Friends Weekend</b>	<b>Fri., Aug. 17 – Sat., Aug. 18, 2012</b>
<b>Drop/Add Period</b>	<b>Tues., Aug. 14 – Fri., Aug. 31, 2012</b>
<b>Labor Day Holiday</b>	<b>Mon., September 3, 2012</b>
<b>Constitution Day</b>	<b>Mon., September 17, 2012</b>
<b>Convocation</b>	<b>Mon., October 15, 2012</b>
<b>Thanksgiving Holiday</b>	<b>Thurs., Nov. 22 – Fri., Nov. 23, 2012</b>
<b>Spring 2012 Pre-Registration</b>	<b>Mon., November 30, 2012</b>
<b>Fall semester ends</b>	<b>Fri., December 7, 2012</b>
<b>Grades Due in Banner/Registrar's Office</b>	<b>Fri., December 14, 2012</b>
<b>Spring Classes Begin</b>	<b>Thurs., January 3, 2013</b>
<b>Drop/Add Period</b>	<b>Thurs., Jan. 3 – Fri., Jan. 11, 2013</b>
<b>ML King Remembrance Program</b>	<b>Fri., January 18, 2013</b>
<b>ML King, Jr. Day</b>	<b>Mon., January 21, 2013</b>
<b>Student Research Day (no classes)</b>	<b>Wed., March 13, 2013</b>
<b>Student Research Week</b>	<b>Mon., March 18 – Fri., March 22, 2013</b>
<b>Spring Break</b>	<b>Mon., March 25 - Thurs., March 28, 2013</b>
<b>Good Friday – Meharry Holiday</b>	<b>Fri., March 29, 2013</b>
<b>Classes End for May grads</b>	<b>Fri., April 26, 2013</b>
<b>Grades Due for May grads</b>	<b>Fri., May 3, 2013</b>
<b>Commencement</b>	<b>Sat., May 18, 2013</b>

#### Calendar Summary by Class & Program: MHS

1-year enrollment term

June 11, 2012 – May 18, 2013

## Financial Information

### Tuition and Fees

Tuition for Ph.D. Students during the academic year 2012-2013 is \$13,560.00. The annual expense for a first-year Ph.D. student in the School of Graduate Studies and Research is estimated to be \$20,122.

Tuition for MSPH students during the academic year 2012-2013 is \$21,500. The annual expense for a first-year MSPH student in the School of Graduate Studies and Research is estimated to be \$27,152.

Tuition and fees are set annually by the Board of Trustees and are subject to review and change without further notice.

The Tuition and Fees Charts are indicated below:

	Ph.D. Year 1	Ph.D. Year 2+	Senior Ph.D.
<b>Tuition</b>	<b>\$ 13,560.00</b>	<b>\$ 13,560.00</b>	<b>\$ 13,560.00</b>
<b>Total fees</b>	<b>6,562.00</b>	<b>5,937.00</b>	<b>6,067.00</b>
<b>Total Tuition and Fees</b>	<b>\$ 20,122.00</b>	<b>\$ 19,497.00</b>	<b>\$ 19,627.00</b>

	MSPH Year 1	MSPH Year 2+
<b>Tuition</b>	<b>\$ 21,500.00</b>	<b>\$ 18,060.00</b>
<b>Total fees</b>	<b>5,652.00</b>	<b>5,342.00</b>
<b>Total Tuition and Fees</b>	<b>\$ 27,152.00</b>	<b>\$ 23,402.00</b>

	MSCI and MSPH Residents Year 1	MSCI and MSPH Residents Year 2+
<b>Tuition</b>	<b>\$ 25,800.00</b>	<b>\$ 12,900.00</b>
<b>Total fees</b>	<b>1,287.00</b>	<b>977.00</b>
<b>Total Tuition and Fees</b>	<b>\$ 27,087.00</b>	<b>\$ 13,877.00</b>

	Master of Health Science (MHS)
<b>Tuition</b>	<b>\$25,800.00</b>
<b>Total fees</b>	<b>5,552.00</b>
<b>Total Tuition and Fees</b>	<b>\$31,352.00</b>

The charts do not include expenses for room and board, books & supplies, transportation, and miscellaneous. For additional information regarding tuition and fees, please contact the Student

Affairs Department of your respective school. Feel free to contact the Office of Financial Aid regarding allowances for living and miscellaneous expenses (room and board, etc.).

## **Payment of Tuition and Fees**

Please see information in the General Information Section entitled Financial Information of this catalog.

## **Financial Assistance**

The SOGSR and the divisions of the College offer financial assistance in the form of fellowships, traineeships, service appointments such as teaching assistantships, graduate assistantships and research assistantships for students enrolled in the Ph.D. Program. All inquiries concerning the availability of such assistance should be addressed to the dean, the divisional chairperson and/or advisers of the intended major area.

Ph.D. training is a full-time activity. Therefore, students receiving a stipend or fellowship are not permitted to hold outside employment. Violation of this regulation could lead to loss of the fellowship.

## **Emergency Loan Program**

Graduate students may receive emergency loan assistance from the college's loan funds and the graduate school emergency funds. Please contact the Office of the Treasurer at 615-327-6220 or the graduate school dean at 615-327-6533 for additional information.

## **Honors and Awards**

### **Dean's Award for Scientific Development**

This award is given to the doctoral student who has shown the greatest scientific development during the past year.

### **Dean's Award for Scientific Productivity**

This award is given to the doctoral student who has published, or whose work has been accepted for publication, as the best paper in a refereed journal during the past year.

### **Dean's Award for Excellence in Teaching**

This award is given to an outstanding faculty member in the School of Graduate Studies and Research MSPH and PhD programs for exemplary teaching during the past year.

### **The National Research Service Award**

This award is presented to students who have successfully competed among a national pool of applicants for pre-doctoral fellowship funds provided by the National Institutes of Health, National Science Foundation and Department of Defense.

### **First-Year Award**

This award is presented to a current enrolled second year student in the MSPH and PhD programs who have attained the highest GPA for the immediately preceding academic year.

### **Division Awards**

These awards are given to the top currently enrolled students (exclusive of first-year students) in each PhD training program and the MSPH program.

## COURSE DESCRIPTIONS

### DOCTORAL PROGRAM

#### Core Curriculum

**ASGS 700 – *Scientific Communication*** – This course introduces students to the health sciences library, to scientific literature, to scientific writing and to oral presentation of scientific information. The course provides weekly practice in reading and writing about papers in scientific journals and in discussion of papers before an audience. **3 credit hours, Fall & Spring**

**ASGS 701 – *Biomedical Sciences IA*** – Lectures, problem-solving sessions, and demonstrations designed to give the student mastery of the organization, composition, and function of the cell at the molecular level; the properties and biological functions of carbohydrates, lipids, nucleic acids and proteins will be covered. Enzymes, metabolic pathways and their regulation, protein synthesis and biochemical genetics will be introduced. The goal is to give the students a full appreciation of the fundamentals of enzymology and biochemical genetics. **4 credit hours, Fall**

**ASGS 703 – *Biomedical Sciences IIA*** – This course provides lectures, problem solving sessions and discussion designed to give the student an understanding of the organization, origin, function and regulation of the cell and its organelles at the molecular level. Major topics covered include the energetics and thermodynamics of life processes; metabolic pathways and their control; membrane structure and function, protein trafficking, the cytoskeleton, signal transduction and the cell cycle. The goal is to provide sufficient comprehension of molecular cell biology to enable the student to follow current developments in this fundamental and rapidly expanding area of research. **4 credit hours, Spring**

**ASGS 706 – *Biomedical Sciences IIIB*** – The purpose of this laboratory rotations course is to acquaint first-year graduate students with research in progress in the laboratory of three different faculty members. The student is supposed to be a participant in the research and will be exposed to scientific knowledge and techniques at a greater depth than is possible in formal laboratory courses and will participate in the kind of informal discussions which will take place in research laboratories among faculty, students and staff. The first rotation takes place in the fall semester and is ten (10) weeks long. The second and third rotations take place in the spring semester for nine (9) weeks each. It is not intended for students to complete a research project. 2 credit hours per rotation, 3 rotations, **total 6 credit hours, Fall & Spring**

**ASGS 723 – *Molecular Methods*** – The module consists of experiments designed to teach students important recombinant DNA techniques, including isolation of plasmid DNA, use of restriction enzymes, cloning of restriction fragments, nick translation, southern and northern hybridizations, DNA sequencing and other important techniques. Required of all students. **6 credit hours, Fall**

**ASGS 725 – *Introduction to Laboratory Research*** – The goal of this course is to teach the first-year students basic techniques commonly used in the laboratory and the underlying concepts for each technique. In addition, students will be exposed to key concepts related to scientific ethics and responsible conduct of research. **3 credit hours, Fall**

**ASGS 730 – *Introduction to Biostatistics*** – This course intends to review basic principles of data analysis to familiarize students with the terminology and principles that can be found in texts or used in consultation with statisticians. **2 credit hours, Spring**

## Advanced Graduate Course

**ASGS 710 – *Introduction to Bioinformatics*** - This course will introduce students to the fundamentals of bioinformatics and computational approaches towards biomedical research. It will cover topics including DNA and protein sequence alignment, algorithms, genomics, proteomics, graph/network theory, biological data bases, and data-mining of large data sets and repositories. **2 credit hours, Fall**

## PHD EMPHASIS PROGRAMS

### BIOCHEMISTRY AND CANCER BIOLOGY

#### Objectives

The goal of the training program in Biochemistry and Cancer Biology is to train the next generation of biochemistry and cancer researchers. Studies in these areas require specific knowledge in multiple fields that have traditionally been independent. Students will receive cancer-oriented training in molecular biology, immunology, functional genomics, cell biology, biochemistry, and proteomics. An emphasis will be placed on hands-on training and students will have his or her course work tailored to their primary interest. Cancer research is a vitally important and growing field of research. Our graduates will be positioned to lead the way to the future prevention and cure of cancer.

#### COURSE DESCRIPTIONS

**BICH 703 – Molecular Genetics** – An advanced course on the biochemistry and molecular genetics of gene expression, gene regulation and mutation. Current advances in prokaryotic and eukaryotic systems are covered. Prerequisite: Core Curriculum. **(3 credit hours, Spring)**

**BICH 704 – Topics in Cellular and Metabolic Regulation** – An advanced course on the regulatory mechanisms controlling major metabolic and cellular physiological processes in eukaryotes. Prerequisite: Core Curriculum or background in metabolism or cellular physiology. **(3 credit hours, Spring)**

**BICH 706 – Membrane Biochemistry** – This course discusses basic and contemporary literature on the structure and functions of biological membranes and includes topics on membrane dynamics, biogenesis and transport by or through membrane components. The cytoskeleton and the extracellular matrix are also discussed. Prerequisite: Background in cellular physiology and/or molecular biology. **(3 credit hours, Fall).**

**BICH 710 – Seminar in Biochemistry** – Discussion of contemporary topics in cancer biology, carcinogenesis, biochemistry, cell and molecular biology. **1 credit hour, Fall & Spring.**

**BICH 712 – Directed Studies** – Individual instruction designed to meet the specific academic needs of the student. This course may be research or didactic instruction. Prerequisite: Consent of the instructor. The grade awarded in this course is S or U if a research course. **1-3 credit hours, Fall & Spring.**

**BICH 713 – Advanced Topics in Biochemistry** – Lectures covering specialized areas of inquiry in biochemistry, cell signaling and molecular biology, consisting of one of three such areas per semester. This course may be taken more than once. Prerequisite: Consent of instructor. This course is offered about once in every three years. **1-3 credit hours, Spring.**

**BICH 730 – Cancer Biology I** – A multidisciplinary course designed to expose students to the latest and promising areas of basic and translational research. Molecular mechanisms underlying carcinogenesis and tumor progression and their relationship to clinical aspects of the disease are discussed. Students will be required to take a Keystone course in the pathobiology of cancer as an additional requirement for the course. 3 credit hours. Prerequisite: Consent of the instructor. **3 credit hours, Fall.**

**BICH 799 – Thesis Research** – Students are required to conduct original research, culminating in the preparation and defense of a dissertation that is acceptable, at least in part, for publication in a professional journal. **1-12 credit hours, Fall, Spring & Summer.**

**PHARM 738 – Carcinogenesis & Cancer Therapeutics** – This course will cover the mechanisms underlying the carcinogenic process induced by chemical, viral or physical agents. Major emphasis will be focused on the mechanisms exploited in developing therapeutic targets for cancer treatment. Lectures on clinical correlates will be presented by clinical oncologists. **3 credit hours, Fall.**

## MICROBIOLOGY AND IMMUNOLOGY

### Objectives

Our program uses a wide array of approaches and techniques to explore the realm of molecular biology, microbial physiology, virology, parasitology, immunology, and microbial pathogenesis. An emphasis will be placed on studying immune responses to infectious agents including HIV-AIDS, the molecular and cellular bases of viral and bacterial pathogenesis, including microbes of the oral flora, mechanisms underlying mitochondrial transport and the regulation of gene expression in infectious agents. Graduate research in our division provides an opportunity to apprentice with distinguished faculty and emphasizes a close faculty-student relationship that creates a learning environment, which is stimulating, productive, and rewarding for all its participants.

### COURSE DESCRIPTIONS

**MICR 702 – Perspectives in Immunology** – This course consists of a series of seminars on recent research advances in immunology. Topics covered include immunochemistry, immunogenetics, cellular immunity, tumor and transplantation immunology, immunopathology and the complement system. Prerequisite: Medical Microbiology or equivalent preparation in immunology. **3 credit hours, Spring, even years.**

**MICR 703 – Seminal Papers on the Foundations of Modern Microbiology** – Students present and discuss papers describing fundamental discoveries in areas related to microbiology. The goal is to familiarize students with the process of scientific discovery, and with the history of major developments in the field. Topics include important discoveries involving major human pathogens, fundamental processes in molecular biology, and the development of technology that has a major impact on current biomedical research. **2 credit hours, Fall, every year.**

**MICRO 707 – Fundamentals of Microbiology** – This course explores the importance of microorganisms as both living systems and disease causing agents. Topics will include discussion of selected, bacterial, parasitic, and fungal infections, and mechanisms of disease pathogenesis. 3 credit hours, Spring, every year.

**MICR 708 – Foundations in Research** – The goal of this course is for the student to critically review the literature relevant to his/her proposed thesis research. The outcome of the course will be a student-prepared paper that provides a thoroughly documented background that supports the rationale for the proposed research project. The choice of the research problem should be determined by the student in consultation with the preceptor. Each student will be guided by a

committee of three faculty members that will include the student's preceptor. Each student will be guided by a committee of three faculty members that will include the student's preceptor. **3 credit hours, Spring, every year.**

**MICR 709 – Host Parasite Relationships** –The course is designed primarily for advanced graduate students. Instruction consists of lectures, informal discussions, and guest speakers. Emphasis is directed to examining the theoretical, molecular, ultrastructural and physiological elements, which characterize hosts and parasites in the broad sense (bacteria, viruses and parasites). Prerequisites: MICR-710 or equivalent preparation in immunology. **5 credit hours, Spring, odd years.**

**MICR 710 – Fundamentals in Immunology** – This course reviews the basic concepts in immunology. It consists of the immunology lecture and laboratory component of Introduction to Host Defense for medical students and seminar/discussions focused on selected topics in immunology. This course may serve as a pre-requisite for advanced immunology courses offered by the Department of Microbiology. **3 credit hours, Spring, every year.**

**MICR 713 – Molecular Biology of Animal Viruses** – Lecture course with emphasis on mechanisms of viral replication, oncogenic transformation, and virus-host cell interactions. Prerequisite: MICR 715. Fundamentals in Virology. **3 credit hours, Spring, alternate years.**

**MICR 714 – Role of Microorganisms in the Living World** – A topical course exploring the biology of microorganisms. Emphasis on mechanisms underlying microbial adaptations and how they influence biological systems. **2 credit hours. Spring, every year.**

**MICR 715 – Fundamentals in Virology** – This course provides a fundamental understanding of the molecular basis of viral replication and virus-cell interactions. The objectives of the course will be accomplished through lecture and journal article discussion. Prerequisite for: MICR 713. Molecular Biology of Animal Viruses. **3 credit hours, Fall, every year.**

**BSCI 719 – Gene Transcription and Regulation** – Structure and function of different RNA polymerases (RNAPs). The role of CTD (C-terminal domain) of RNAP II and basic aspects of initiation of transcription by RNAP I, II and III. Molecular mechanisms of transcription activation. Regulation of basic transcription initiation, elongation and termination in bacterial system. Regulation of transcription initiation, elongation and termination in eukaryotic system. Chromatin and regulation of transcription. DNA topology and gene expression. Structural studies (X-ray crystallography and NMR) of transcription factors. Nucleic acid-protein interactions. Regulation of expression of tumor suppressor genes and human tumor virus genes. Methods involved in transcription research. **3 credit hours, Spring, even years.**

**BSCI 736 – Readings in Biomedical Sciences – (Directed Studies)** – Intensive reading under the guidance of a faculty member in an area selected by the student. The student and faculty member meet weekly to discuss the readings; the student may be required to write a paper on the semester's reading. **1-3 credit hours, Fall & Spring, every year.**

**MICRO 850 – Microbiology Research** – Ph.D. Dissertation Research, required for doctoral candidates. **1-12 credit hours, Fall, Spring & Summer, every year.**

**MICRO 900 – Microbiology Seminar** – Weekly discussion of current topics in microbiological research and of research within the department. **0-1 credit hour, Fall & Spring, every year.**

**MICRO 901 – Advanced Seminar and Special Topics** –This course is a discussion by advanced graduate students and a faculty discussion leader who will make assignments from the current literature on a specific subspecialty. The course will examine experimental design, laboratory techniques used, validity of conclusions and contributions to the knowledge of the field under consideration. **1-3 credit hours, Fall & Spring, every year.**

## NEUROSCIENCE

### Objectives

This program aims to significantly contribute to the production of the next generation of neuroscientists by training students to conduct basic, translational, clinical, social and behavioral research to generate new knowledge that will contribute to the nation's effort to reduce health disparities in the areas of neurological disease, mental health as well as drug abuse and addiction, including alcoholism. Students will perform research with faculty whose interests range from the molecular neurobiology of cellular signaling and synaptic plasticity to the neurobiology of complex animal behavior.

### COURSE DESCRIPTIONS

**NSC1 700 – Neurobiology of Disease** – The course has five modules (1 credit hour each). Five modules are: Parkinson's Disease and Movement Disorders; Alzheimer's Disease and Dementias; Chronic Pain; Addictions; Depression and Mood Disorders. The importance of this course, and the rationale for its development, is to foster preparedness for interdependent collaborative research that spans from bench to bedside, and allows laboratory investigators to exploit clinical insights to inform basic science inquiries. The goal is to train scholars for participation in interdependent research across the molecular and cellular to integrative and clinical continuum. The course will foster this interdependence by both the content of the courses as well as the participation in these courses by graduate, medical, postgraduate (MD and PhD) fellows. The selection of the disease themes of this course reflect areas of research interest and strength at both Meharry and Vanderbilt, and also- in their didactic content- will allow students to become familiar with the breadth of experimental strategies and areas of scholarship (including genetics and imaging, for example) that converge to facilitate discovery to translation to clinical diagnosis and intervention. Prerequisite: Graduate Neuroscience. **1-5 credits, Fall & Spring.**

**NSCI 709 – Advanced Neurophysiology** – A functional approach to nervous system mechanisms. Topics include sensory and motor mechanisms, sensory motor integration and higher functions. The course will include lectures, selected literature discussions and essay examinations. Prerequisite: Human Physiology. **3 credit hours, Fall.**

**NSCI 712 – Seminar in Neuroscience** – Weekly discussion of current topics in neuroscience research and of research within the Department of Neuroscience and Pharmacology. **1 credit hour, Fall & Spring.**

**NSCI 714 – Research in Neuroscience** – Participation and credit in this course are arranged by the COI of students working on their dissertations in physiology. Students will receive pass or failure grades until degree requirements have been fulfilled. At that time, a letter grade will be assigned. This course may be repeated for credit. Prerequisite: Core Curriculum. **1-12 credit hours, Fall, Spring & Summer.**

**NSCI 720 – Readings in Neuroscience** – In this course, the student should complete a comprehensive reading list of subjects specifically associated with his/her area of research before the dissertation defense. There will be no formal meetings or exams; however, relevant material from the readings may be included in the dissertation defense. Pass or fail grades will be registered until degree requirements are fulfilled, at which time the COI will assign a letter grade. Prerequisite: COI approval. **3 credit hours, Fall or Spring.**

**NSCI 721 – Dissertation Research** – Students are expected to register for this course in their last semester of residence. Course is completed with the approval of the written dissertation by the COI. Prerequisite: COI approval. **1-3 credit hours, Fall, Spring or Summer.**

**NSCI 724 – Neuronal Physiology** – Advanced study of cellular processes related to nervous system functions will include aspects of neurophysiology, neurochemistry and neuroanatomy. Format will be primarily lectures and selected literature readings. Prerequisite: Core Curriculum. **3 credit hours, Fall.**

**NSCI 735 – Graduate Neuroscience** – This course will help students achieve an integrated and correlated understanding of nervous system structure, function, dysfunction and therapeutics. The course will be taught in the following blocks: 1) excitable cells and synapses, including muscle and the autonomic nervous system; 2) Nervous system anatomy, meninges and vasculature; 3) sensory systems; 4) motor system; and 5) higher function. Each block will be composed of instruction in Biochemistry, Neurology, Pathology, Anatomy and Cell Biology, Pharmacology, Physiology, Psychiatry and Behavioral Sciences. **5 credit hours, Fall.**

**PHARM 722 - Neuropharmacology** – This course presents an overview of neuropharmacology, including fundamentals of receptor theory, Neurotoxicology, neurophysiology and drug abuse. Mechanisms and problems concerned with neurotransmission will be discussed. Emphasis is given to the neurochemical basis of CNS disorders and drug intervention. Lecturers, current literature, discussions are included. **3 credit hours, Fall.**

**PHARM 723 – Toxicology** – Principles involved in toxicity of drug and chemical agents will be presented. Topics include xenobiotic biotransformation, toxicokinetics, chemical carcinogenesis, neurotoxicology, metal toxicity, toxic response of skin & respiratory system & occupational toxicology. Toxicological mechanisms of action, rationale for therapeutic measures against effects of toxic chemical agents, and the basis for toxicological pathology, Current issues in toxicology (toxicogenomics) will also be covered. Course format includes lectures, and student involvement in critical review of current literature. **3 credit hours, Spring.**

## PHARMACOLOGY

### Objectives:

This is an interdisciplinary program leading to the doctoral degree. The objective of the program is to provide students with an intensive knowledge of pharmacology as a science, sufficient exposure to pharmacological research methodology to provide skill in the practice of the science, and adequate opportunity to perform pharmacological research. More broadly, the program instills in its students a problem-solving approach to the understanding of pharmacology, an attitude that simulates reasoned, objective correlation in applying pharmacological and other knowledge to the solution of problems.

### COURSE DESCRIPTIONS

**PHAR 705 – Cardiovascular Pharmacology** –The pharmacology of drug agents exerting major effects on the cardiovascular system will be presented in lectures, discussions, and demonstrations. Mechanism of action, basis for therapeutic application and limiting side effects of the drug agents will be discussed. Research methodology utilized in studying these agents will also be covered. **2 credit hours, Spring.**

**PHAR 706 – General Pharmacology** – The pharmacological basis of therapeutics is presented by means of lectures, conferences and demonstrations. Emphasis is placed on the factors governing drug action, dose-response relationships, the relationship between chemical structure and pharmacological action, the problems associated with absorption, distribution metabolism and elimination, and the mechanism of action of the common classes of drugs. Attention is also given to contra-indications, side effects and toxic effects of these compounds. **5 credit hours, Fall.**

**PHARM 710 – Cell Surface Receptors** – The course consists of interactive but lecture-like sessions. Exams are take home, open book, and focus on critical thinking and using what is taught in a new experimental setting. The course will begin with studies of receptor identification and characterization in simple cellular settings, and then extend those studies to *in vivo* formats, using classical methodology. **2 credits hours, Spring.**

**PHARM 715 – Drug Metabolism** – This course will cover in depth the concepts involved in metabolism of lipophilic molecules – identifying Phase I & Phase II enzymes; their location, mechanism, typical substrates, genetic variation, species variation, inhibition and drug interaction and drug design. **2 credit hours, Spring.**

**PHARM 722 – Neuropharmacology** – This course presents an overview of neuropharmacology, including fundamentals of receptor theory, Neurotoxicology, neurophysiology and drug abuse. Mechanisms and problems concerned with neurotransmission will be discussed. Emphasis is given to the neurochemical basis of CNS disorders and drug intervention. Lecturers, current literature, discussions are included. **3 credit hours, Fall.**

**PHARM 723 – Toxicology** – Principles involved in toxicity of drug and chemical agents will be presented. Topics include xenobiotic biotransformation, toxicokinetics, chemical carcinogenesis, neurotoxicology, metal toxicity, toxic response of skin & respiratory system & occupational toxicology. Toxicological mechanisms of action, rationale for therapeutic measures against effects of toxic chemical agents, and the basis for toxicological pathology, Current issues in toxicology (toxicogenomics) will also be covered. Course format includes lectures, and student involvement in critical review of current literature. **3 credit hours, Spring.**

**PHARM 735 – Research Problems in Pharmacology** – This is essentially an independent study, qualified students work with individual staff members in areas not covered in other available courses. **1-6 credit hours, Fall & Spring.**

**PHARM 736 – Current Topics in Pharmacology** – By means of lectures and/or discussion sessions, this course will offer opportunity to evaluate current advances in the field of pharmacology. Each student enrolled will be required to write and submit a critical evaluation of an assigned, current, published research article. **3 credit hours, Spring.**

**PHARM 737 – Pharmacokinetics** – Also offered as a module in Pharm 721 (Fundamentals of Pharmacology). This course module is designed to understand the pharmacokinetics principles that govern the absorption, distribution, metabolism, and elimination of drugs. Basic pharmacokinetics parameters are examined using one- and two-compartment modeling. In addition, applications of pharmacokinetics are examined with respect to clinical situations, and students will be introduced to the use of computer programs in pharmacokinetics. **2 credit hours, Spring.**

**PHARM 738 – Carcinogenesis & Cancer Therapeutics** – This course will cover the mechanisms underlying the carcinogenic process induced by chemical, viral or physical agents. Major emphasis will be focused on the mechanisms exploited in developing therapeutic targets for cancer treatment. Lectures on clinical correlates will be presented by clinical oncologists (cross-listing with Cancer Biology). **3 credit hours, Fall.**

**PHARM 741 - Fundamentals of Pharmacology** – This course is an introduction to *in vivo* physiological mechanisms, anatomical structure of organ systems, and regulatory feedback pathways responsible for drug metabolism and physiological homeostasis. Classical studies that shifted the paradigm in a particular area and contemporary research will be discussed to demonstrate clarity of thinking,

focused experimental strategies leading to genuine discovery, as well as potential difficulties in interpretation of results of experiments (cross listing with PHAR 320. Pharmacological Targets and Mechanisms - Vanderbilt University). 4 credit hours, Fall.

**PHAR 799 – Research in Pharmacology** – Students are required to conduct original research, culminating in the preparation and defense of a dissertation. **1-12 credit hours, Fall, Spring & Summer.**

## PHYSIOLOGY

### Objectives:

The objective of the program is to provide students with a foundation in the physiological function of the body at the level of organs and systems, and allow them to conduct research with faculty who are interested in studying health disparities within the population. The faculty research focuses on the study of the cellular and molecular basis of cardiovascular pathophysiology, and other sub-disciplines such as neurophysiology, gastrointestinal physiology, reproduction and endocrinology. The goal of the program is to produce graduates that are able to integrate physiological sciences and medicine, and ultimately, successfully compete for and fulfill positions in academia, industry, or governmental research.

## COURSE DESCRIPTIONS

**PHYS 702 - HUMAN PHYSIOLOGY** - This course covers the function and regulation of the major organ systems of the body. The format of the course will include lectures, discussion sessions, as well as, student presentations. Grades will be assigned based on student participation, presentations and performances on examinations. **4 credits, Fall.**

**PHYS 707 - ENDOCRINOLOGY/GASTROINTESTINAL PHYSIOLOGY** - This course extends the knowledge base of Endocrine and Gastrointestinal Physiology gained in Human Physiology (PHYS 702). Thus, it will explore the historical and current literature to provide a solid base of knowledge, and enable the students to interpret scientific data and critique experimental design as it relates to endocrine and gastrointestinal physiology. In addition, there will be a number of laboratories in which the structure and microanatomy of the endocrine and gastrointestinal tissues are examined in relationship to function. Advanced concepts and the impact of current research will be emphasized. Grades will be determined by student participation, examinations, and a review paper. **4 credit hours.**

**PHYS 710 - CARDIOVASCULAR PHYSIOLOGY** - This course will start out with basic biophysics of ion channels in cardiac muscle, discuss the role of calcium in contraction and describe the heart as a pump in determining the general dynamics of cardiac function. Hemodynamics of flow and microcirculation will be dealt with in a manner that takes into account the vascular reactivity. The interplay of various regulatory mechanisms in blood flow and pressure control and interplay of regional circulatory beds and local vascular reactivity in such control will be discussed. The second half of the course will introduce the contractile mechanisms of vascular smooth muscle cells, their neuro-hormonal regulation, endothelial cell control of vascular tone, oxidative stress and vascular functions. Separately, molecular studies in hypo, hyper and normotensive mice (the implications in human), ischemic heart disease and congestive heart failure, implications in diabetes, endocrine disorders (risk factors in African-American population) and the role of nutrition and behavior in such diseases will constitute an important part of this segment. Student

presentations of recent and important literatures on these subjects, a mid-term examination and a final paper will determine the grade. **3 credit hours.**

**PHYS 712 - SEMINARS IN PHYSIOLOGY-** Topics relevant to physiology will be presented by faculty, visiting scholars and graduate students. Participating graduate students who have achieved candidacy status will present one seminar per year. This course is required for all graduate students studying for the Ph.D. degree in physiology. Attendance is mandatory to receive a satisfactory grade. **1 credit hour, Fall and Spring** (Satisfactory/Unsatisfactory).

**PHYS 714 - RESEARCH IN PHYSIOLOGY** - Research opportunities are available from the molecular to systems level physiology on contemporary problems in cardiovascular disease, endocrine and neuroscience. Students will participate in experimental design, research, data analysis and data reporting. Prior approval of supervising faculty member and department chairperson is required. Students will receive satisfactory or unsatisfactory grades until degree requirements have been fulfilled. **1-11 credit hours, Fall/Spring/Summer** (Satisfactory/Unsatisfactory).

**PHYS 720 - READINGS IN PHYSIOLOGY AND BIOLOGY** - In this course, the student should complete a comprehensive reading list of subjects specifically associated with his/her area of research. There will be no formal meetings or exam but a review article may be required. This course may be taken only once for credit. **3 credit hours, Fall/Spring/Summer.**

**PHYS 721 - DISSERTATION RESEARCH** - This is a practical course in assembling, analyzing and presenting large quantities of experimental data. Students are expected to register for this course in their last semester of residence. Course is completed with the approval of the written dissertation by the COI. Last semester of residence, **3 credit hours, Fall/Spring/Summer**

## **DIVISION OF PUBLIC HEALTH PRACTICE**

### **Objectives:**

The MSPH program strives to provide unique educational opportunities in public health related professions to students, allowing them to gain competencies to work as professionals in the public and private sector as well as voluntary agencies with special emphasis on serving the underserved.

## **COURSE DESCRIPTIONS**

**MSPH 70001 – Epidemiology I (Introductory)** – This course is designed to explore principles of investigating the differential distribution of disease among population groups, provide exercises demonstrating epidemiologic techniques and introduces students to the use of data to treat and prevent disease and evaluate health care effectiveness. **3 credit hours**

**MSPH 70201 – Biostatistics I (Introductory)** – This is an introductory course in the basic statistical concepts, principles, and methods used in the health sciences. Taught as part of the core curriculum for all Master of Science in Public Health students, the broad goal of this component is to enable students to have knowledge of the basics and their application in the experimental and non-experimental phases of health care administration and medical disciplines. The student should understand the traditional role of biostatistics and its newer role in the computer age and the age of innovative health care delivery systems. **3 credit hours**

**MSPH 70301 – Health Planning** – This course provides an introduction to the planning processes used in various health care organizations. Includes such issues as allocation of resources and institutional change in the health care environment. **3 credit hours**

**MSPH 70501 – Strategic Management** – This course provides students with a comprehensive understanding of strategic management in the health care environment. Strong emphasis is placed on the case study method. Healthcare organizations, like other organizations, are presented as ecological units relying on their environments (internal and external) as sources for attaining their various strategic objectives. As a result, students are exposed to the techniques for environmental analysis for the long-term direction of the organizations. **3 credit hours**

**MSPH 70701 – Environmental Health** – This course is designed to survey those factors that impact upon the environment and human health. The student will be provided a conceptual framework for the study, analysis and control of various environmental problems. **3 credit hours**

**MSPH 70801 – Health Economics** – This course is designed to acquaint students, through lectures and discussion, with those principles and techniques of economic analysis, which are helpful in developing and evaluating health programs. The course will concentrate on selected topics in economics, allocation of public goods and economic dynamics. Case studies will be selected for their special relevance to the health field. **4 credit hours**

**MSPH 71101 – Health Care Accounting** – This intermediate level course exposes students to the process of generating and analyzing financial information in healthcare settings. The course will cover financial, managerial and cost accounting topics. The students will learn about the accounting tools and techniques used in health care organizations through the use of theory and practical examples. The course will also educate the students of the limitations of financial information generated through the traditional processes. **3 credit hours**

**MSPH 71201 – Health Care Seminar** – This seminar is designed to provide students an opportunity to integrate previous course content into a framework relevant to health care. Seminar sessions, utilizing case materials, the graduate faculty and occasional guest lectures, will focus on methods of health research, epidemiology, health economics, poverty and illness, evaluate research, communication skills, etc. **3 credit hours**

**MSPH 71301 – Quantitative Methods in Health Administration** – This course is about managerial decision-making in health care organizations (HCOs). Thus, the quantitative methods selected are regarded as the minimum essential tools that must be a part of the health care manager's repertoire of analytic tools for effective decision-making. There are basic methods as well as advanced methods, and a general understanding of algebra, statistics, financial and managerial accounting, health economics and health services administration. **3 credit hours**

**MSPH 71401 – Epidemiology II (Advanced)** – This advanced course deals with epidemiology theory and methods in the actual study of disease etiology with particular emphasis upon case control study methods including matching, confounding and selection techniques. Prerequisite: MSPH 70001 Epidemiology I. **3 credit hours**

**MSPH 71501 – Organization and Human Resource Management** – This course is designed to provide a comprehensive, current introduction to the human resources management function as it relates to the delivery of health care and related services. **3 credit hours**

**MSPH 71601 – Biostatistics II (Advanced)** – This course deals with statistics required for the analysis of medical care data. It covers further techniques for the application of statistical theory to actual data, combining lectures with computational experience. Particular emphasis will be

placed upon the analysis of variance (ANOVA), linear and multiple regression, correlation and distribution free methods. Prerequisites: MSPH 70001 Epidemiology I and MSPH 70201 Biostatistics I. **3 credit hours**

**MSPH 71701 – Occupational Health I (Introduction)** – A general overview of occupational health and safety, including historical development, concepts and a general introduction to recognition, evaluation and control of hazards. The diagnosis, pathophysiology, management, and prevention of work connected illness and accidents are surveyed. **3 credit hours**

**MSPH 71801 – Externship/Field Placement** – The application of skills gained in the class to actual health agency and community programs. Students will identify and solve real health problems in communities, operating agencies, local and state governments, etc. **6 credit hours**

**MSPH 72001 – Data Management** — An introduction to principles needed for processing large data files. Subject material will cover editing, encoding, structuring and manipulating data, as well as timing considerations. Use will be made of the data processing computing equipment at Meharry Medical College. **3 credit hours**

**MSPH 72201 – Occupational Health II (Advanced)** – Workplace relationship of specific hazards such as solvents and metals are examined. Cancer is the main entity covered--its etiology, prevention, diagnosis, treatment and control. History taking (standard and predictive for placement and surveillance), patch treating, treatment trials and protective measures are reviewed. **3 credit hours**

**MSPH 72401 – Informatics for Global Health** – The purpose of this course is to introduce students to medical informatics with an emphasis in global health care. 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. The course consists of lectures with discussion and analysis as well as hands-on instruction with some software applications and electronic resources. **1 credit hour**

**MSPH 72501 – Health Behavior** – The purpose of this course is to provide an introduction to the application of the social and behavioral sciences to health. Emphasis will be placed on (1) how theories, empirical research, findings, and methodologies of psychology, sociology, and anthropology apply to health issues, and (2) the major social and cultural determinants of health-related behavior. **3 credit hours**

**MSPH 72601 – Ethics in Global Health** – This course is 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 a framework in which to recognize, examine, resolve, and prevent ethical conflicts in their international work.

**1 credit hour**

**MSPH 72801 – Leadership in Global Health** – This course is an introduction to leadership theory and practice, directed toward those who seek leadership positions in the area of global health. The course will introduce students to concepts of leadership from an individual and collective perspective with emphasis on roles and responsibilities related to the dynamics of global health. **1 credit hour**

**MSPH 73001 – Health Administration** – This course introduces the basic principles, concepts and theories of management in the context of the health care delivery system. It emphasizes the facts, problems and issues of health care administration at all levels of the delivery system. **3 credit hours**

**MSPH 73201 – Health Finance** – This course includes analytic techniques, capital budgeting, cost of capital, evaluation, leverage, aspects of financial planning and control. **3 credit hours**

**MSPH 73601 – Research Design** – This course is designed as an overview of research design and methodology with specific attention to individual student needs as related to the completion of the thesis. **3 credit hours**

**MSPH 73801 – Managed Care** – This course is designed to create a basic understanding of the managed health care environment in the United States. The course will cover: the history, growth and development of managed care; the various types of managed care organizations; contracting in the current health care delivery system; medical management; general management; marketing; finance; underwriting; and legal/regulatory issues. The commercial HMOIPPO market, the emerging public HMO market (Medicaid, Medicare, CHAMPUS) and special market segments (such as worker's compensation) also will be covered in the course. The objectives of the course include: preparing students to understand the basic structures, organization and functions of managed care organizations; preparing students to function knowledgeable in a variety of managed care settings; preparing students to understand the relationship between managed care and various health care reform initiatives; and preparing students to negotiate effectively in managed care contracting scenarios. **3 credit hours**

**MSPH 73901 – Readings in Public Health** – An intensive reading course under the guidance of a division faculty member in an area of public health. The class meets weekly to discuss the selected readings; each student will be required to write a minimum of one research paper on the semester's readings unrelated to the student's thesis, investigating a topic of interest in public health not covered by the required division curriculum for the Master of Science in Public Health degree to provide an opportunity for advanced graduate students to conduct individual readings in public health to broaden their areas of knowledge and potential research opportunities.

**3 credit hours**

**MSPH 74201 – Organizational Behavior** – An advanced seminar on the health care organization in a competitive environment. Concepts and practices of total quality management, new techniques and regulations in personnel management and group development will be discussed. **3 credit hours**

**MSPH 74501 – Program Evaluation** – This course introduces students to the basics of program evaluation from the public health perspective. Elements of program evaluation will include steps as engaging stakeholders, describing the program, focusing on the evaluation design, gathering credible evidence, justifying conclusions, and ensuring the use and sharing of lessons learned.

**3 credit hours**

**MSPH 74601 – Health Promotion and Health Education** – This course will provide a basic framework for systematically applying the behavioral and social sciences to address public health problems. Emphasis is placed on the delineation of risk behavior, their determinants, and the design and implementation of appropriately targeted health promotion and education interventions that are likely to impact critical health behaviors and health status. Prerequisites: MSPH 73601 Research Design and MSPH 72501: Health Behavior. **3 credit hours**

**MSPH 75301 –Occupational Toxicology** – Basic toxicological principles such as dose response, metabolic pathways and factors influencing toxicity are studied. The response of specific organ systems to toxic agents and recognition of clinical manifestations of specific classes of toxicants are emphasized. **3 credit hours**

**MSPH 75701 – Industrial Hygiene** – This course is a survey of the identification, evaluation and control of those factors of the environment that may cause illness, lack of well being or discomfort among workers or among the community. **3 credit hours**

**MSPH 76001 – Interdisciplinary Seminar** – This seminar is designed to provide students an opportunity to integrate previous course content into a framework relevant to community health

scientists and practitioners. Seminar sessions utilize case materials, problem formulation, poverty and illness, epidemiology, health economics, evaluation research, etc. **3 credit hours**

**MSPH 79001 – Health Law, Policy & Ethics** – A seminar designed to introduce the definitions, structures and functions of the law and its effects on and its use in the American health care system. Fundamental legal principles relating to the delivery of health care services in this context are emphasized. Important topics include a primer on administrative law and the medical practice acts, health care practitioners and patient relationships, medical liabilities, hospital practices and the law, economic and social regulation of health care facilities, health antitrust law and important ethics concepts in health care delivery. **3 credit hours**

**MSPH 79201 – Health Care Marketing** – This course provides students with a comprehensive understanding of health services marketing. Strong emphasis will be placed on developing understanding of carefully selected field projects that will serve to practically apply marketing knowledge to the practitioner environment. **3 credit hours**

**MSPH 80001 – Thesis Research** – This course will familiarize students with the process of research. The thesis process will help students better understand the effects of that process on providing new knowledge to the field of research (utilizing research design, methodology, and literature search). Prerequisite: MSPH 71801-Externship. **1 - 3 credit hours**

## **DIVISION OF CLINICAL INVESTIGATION**

### **Objectives**

The Clinical Research Education and Career Development (CRECD) program at Meharry Medical College offers a two-year fellowship for Physicians and other doctoral-level care professionals leading to a Master of Science for Clinical Investigation (MSCI) degree. The program's ambitions are to expand the cadre of well-trained clinical researchers, particularly minorities, and foster careers in clinical investigation that will address racial and ethnic health disparities. The curriculum allows scholars to concentrate their electives to accommodate two major tracts: 1) Patient-oriented and 2) Epidemiology/Health Service research. The program's curriculum includes core didactic, elective and experimental design sessions for clinical research training that spans the spectrum of translational science ranging from molecular medicine to epidemiology to qualitative research providing fundamental skills and methodology required by well-trained independent clinical investigators.

### **MSCI Program of Study**

The Masters of Science in Clinical Investigation (MSCI) Program is a multidisciplinary curriculum designed to provide: (1) a broad set of understandings and capabilities to understand and effectively communicate and collaborate with clinical investigators from a broad range of disciplines and (2) a disciplinary depth to each scholar's area of concentration learning. The curriculum emphasized health care disparities affecting minority and underserved populations to resonate with the mission of the College. The first year will be intensive for this instruction with additional instruction also offered during the second year.

## **COURSE DESCRIPTIONS**

**MSPH 70001 – Epidemiology I (Introductory)** – This course is designed to explore principles of investigating the differential distribution of disease among population groups, provide exercises demonstrating epidemiologic techniques and introduce students to the use of data to treat and prevent disease and evaluate health care effectiveness. **3 credit hours**

**MSCI 702 – Biostatistics I** – Basic concepts of biostatistics, including probability, sampling distributions (discrete/continuous), hypothesis testing, parameter estimation, and confidence intervals. Classical data analyses for cohort and case-control studies. Incidence density rate definition, estimation, rate-, risk-, and odds-ratios, analysis of cohort and case-control data, and stratified analysis. **3 credit hours**

**MSCI 704 – Molecular Medicine** – This course links introductions to current and emerging molecular techniques in clinical discovery and diagnosis, to their application in clinical research. Examples include the use of qRT-PCR and SNPs in the identification of genetic risk factors for disease and disease prognosis; pharmacogenomics; the advancing use of biologics, including but not limited to therapeutic antibodies) in a variety of therapeutic areas; the impact of HLA antigen subtypes in tissue matching and in disease outcomes; the use of genomics and proteomics in discovery, diagnosis, and therapeutic monitoring; advances in stem cell biology for therapy and tissue engineering. July and August every other year **3 credit hours**

**MSCI 705 – Minority Communities, Minority Health and Health Disparities** – The overall goal of this course directed by Dr. Bruce Marino is to provide students with a critical understanding of the historical, political, economic, social, cultural, and environmental factors associated with the inequitable health status of racial and ethnic minorities. Students in this course will examine how individual and community-level factors contribute to the creation and perpetuation of health disparities. Students will also be exposed to current literature and have the opportunity to discuss issues such as the intersection of race/ethnicity with other social determinants (e. g. gender, socioeconomic status); the measurement of discrimination and racism and the effectiveness of current health and social policies designed to improve minority health and eliminate health disparities. By the end of the course, students will have a familiarity with the issues, challenges, barriers, and proposed solutions associated with the health of minority communities. **2 credit hours**

**MSCI 707 – Research Ethics** – The focus of this course is to develop expertise in the principles, practices and challenges ensuring the ethical conduct of biomedical research. Ethics will be reviewed in historical and contemporary contexts. This course addresses themes including what makes research design ethical, how federal regulations factor into protecting human subjects, how the goals of informed consent are best achieved, how to recruit and retain research subjects and how issues of discrimination and disparity specific to minority populations should be addressed. The course will respond to current issues in research ethics as they arise, such as regulatory oversight of pharmaceuticals, research using genetic samples, and responding to new drug data that may cause alarm among the public. **2 credit hours** (Offered every other year)

**MSCI 710 – Scientific Communication/Grant Writing** – This course is composed of a scientific communications module taught by Drs. Dolce and Limbird and a Grant Writing Module taught by Dr. Rucker. Trainees learn how to read and understand a scientific paper, how to describe a data figure, how to present a 10-minute talk and how to present a poster, with talk and poster presentations as part of the coursework. The grant writing module is composed of 8 hours of didactic introductions to grant writing during the June Scientific Communication module, with the involvement of Dr. Rucker, on the grant writing teams for the K Awards that are written subsequently by all MSCI participants. Given in June of each year with meetings 6 hours each week. **2 credit hours**

**MSPH 71401 – Epidemiology II (Advanced)** – This advanced course deals with epidemiology theory and methods in the actual study of disease etiology with particular emphasis upon case control study methods including matching, confounding and selection techniques. Prerequisite: MSPH 70001 Epidemiology I. **3 credit hours**

**MSCI 722 – Clinical Research Project** – The primary objective is design, implementation, and analysis of a mentored clinical research project. The trainees will coordinate research activities

with their Mentoring Committee and be guided in narrowing their research focus, develop a professional identity and identify short and long-term research and career goals. **2 credit hours**

**MSCI 723 – Fundamental Principles of Human Research** – An overview of human subject research methods. This course is designed to cover all the aspects of human subject research methods, includes practical topics and insight for human subject research and an in-depth review of the science of clinical trials with an emphasis on statistical methodology. **3 credit hours**

**MSCI 807 – Clinical Health Behavior Methods** – (Social and Behavioral Science for Public Health) The course will address two core areas in social and behavioral science for public health: 1) the measurement of knowledge, attitudes and behaviors that are relevant to health behavior research, with a focus on scale development and 2) the dispositional and situational variables that underlie current theories of behavior and behavior change, with current applications. **(VU 3 credit hours)**

**MSCI 810 – Clinical Economics and Decision Analysis** – This course will provide an overview of qualitative and quantitative decision making with a dominant focus on quantitative techniques for decision-making, using clinical and economic endpoints and their role in clinical strategies of care and health policy. Topics include: cognitive heuristics, Baye's 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. **VU 3 credit hours**

The MSCI program allows for nine credit hours of elective courses, which permits trainees to select areas of study related to their specific interest and include:

- Biostatistics (advanced)- link to url at VU
- Epidemiology (advanced),
- Health Behavior Methods: Methods and Motivation
- Medical Writing for Clinical Investigators
- Drug and Device Development
- Environmental Health
- Behavioral Methods
- Health Economics; Health Finance; Clinical Economics/Decision Analysis
- Genetic Analysis of Complex Human Traits
- Receptors; Drug Disposition; Pharmacokinetics (MMC PHARM .....
- Program/Policy Evaluation
- Cancer Epidemiology
- Maternal and Child Health
- Pharmacoepidemiology
- Infectious Diseases and Vaccines
- Neurobiology of Disease

Other courses approved in the PhD curriculum at MMC or at VUMC, as appropriate.

## **MASTER IN HEALTH SCIENCES PROGRAM (MHS)**

### **Objective**

The goal of this academic program is to academically prepare pre-professional students for the rigors of matriculating in professional programs.

## COURSE DESCRIPTIONS

**GMHS 705 - Fundamentals of Genetics:** The overall goal of the course is to provide basic concepts in genetics that are fundamental to the study of biomedical and health sciences. The course provides information in Cytogenetics, mitosis/meiosis, and gametogenesis, linkage mapping and Mendelian and non-Mendelian genetics. (2 credit hours, Fall)

**GMHS 706 - Fundamentals of Microbiology:** The overall goal of the course is to help students understand general microbiological principles and properties of microorganisms including a thorough understanding of host-parasite relationships and mechanisms of microbial pathogenicity. Content will include prokaryotic cell structure and function, microbial physiology, fundamentals of macromolecular synthesis and regulation of prokaryotic gene expression. Principles related to immunology, mycology, virology and host-parasite relationships including mechanisms of pathogenicity are also presented. (4 credit hours, Fall)

**GMHS 707 - Fundamentals of Biochemistry:** This course is designed to present basic concepts in biochemistry. Subject emphasis is placed on the composition, conformation and function of proteins, the generation and storage of energy, control and regulation of metabolism, the biosynthesis of macromolecules and information, storage, transmission and expression. Where germane, the relationship of biochemical disorders to clinical diseases will be discussed. (4 credit hours, Fall)

**GMHS 710 - Cell and Molecular Biology:** The overall goal of this course is to provide an understanding of basic cell and molecular biology concepts fundamental to the study of biomedical sciences including medicine and dentistry. The course provides content related to DNA structure and its replication, translation, transcription, regulation of gene expression in eukaryotic cells and recombinant DNA technology. Principles related to protein purification, cell culture, cell cycle control, cancer and cell signaling/communication will also be presented. (4 credit hours, Fall)

**Fundamentals of Anatomy:** This course teaches the fundamentals of human anatomical structure. Special emphasis will be given to muscular, skeletal, nervous, endocrine, cardiovascular, and respiratory systems. The structure and related function of each of these body systems will be examined in detail. The major anatomical structures of other body systems (e.g., gastrointestinal) will also be covered. (2 credit hours, Spring)

**Fundamentals of Neurosciences:** This course is a comprehensive introduction to the mammalian nervous system, focusing on the structure and function of the human brain. Anatomical, cellular, chemical, physiological, and molecular aspects of neuroscience will be discussed. Topics that will be covered include: neurons and glia, neuroanatomy, action potentials, synaptic transmission, neurotransmitters, sensory systems (vision, hearing, and touch), motor systems, behavioral responses, development, learning and memory, aging, mental illness, neurodegenerative diseases, and genomics. (2 credit hours, Spring)

**Fundamentals of Pathology:** This course provides the students with the general concept of Pathophysiology, which will be discussed with appropriate reference to the general pathologic processes. An organized system review of the commonest diseases with adequate insight into causes, clinical manifestations, and diagnosis will be covered (2 credit hours, Spring)

**Fundamentals of Pharmacology:** The course provides an overview of the basic concepts of the pharmacological treatment of various diseases affecting major body systems and the drugs associated with the treatment process, drug therapy, dosages, actions, and drug administration routes. (2 credit hours, Spring)

**Physiology:** This course introduces students to the structure and function of the various systems of the human body at a very basic level. Correlative information on selected diseases supplements the presentation. (4 credit hours, Spring)

**Academic Skills I and II:** This course will cover the basic reading/writing and critical thinking skills needed for successful matriculation of pre-professional students. (2 credit hours, Fall and 2 credit hours, Spring)

## HEALTH POLICY CERTIFICATE PROGRAM

### Objective

Completion of the certificate in health policy will increase students' marketability for enrollment in other graduate programs, residencies and employment opportunities in the health policy arena.

### Admission Requirements

There are currently 10 slots available for full tuition remission towards completion of the certificate program. In order to qualify, student must currently be a medical, dental, Ph.D. (must be candidates for the degree) or MSPH student at Meharry Medical College. Students must complete all requirements for the certificate prior to completion of their regular degree program. Given this requirement, some students will not be suitable candidates as they will complete their degree programs before they can complete all requirements for the certificate. In addition to the abovementioned requirements, students must also:

- submit a completed application for admission
- submit a statement of interest (2 page minimum)
- have a minimum 3.0 grade-point-average (GPA)

For more information on the program, please contact Keydron Guinn, Ph.D. Director of Certificate Program, at 615-327-6164 or by email at [kguinn@mmc.edu](mailto:kguinn@mmc.edu).

In order to complete the health policy certificate, students must complete a total of 15 credit hours, which includes two core courses (Fundamentals of Health Policy and Health Policy Capstone).

### COURSE DESCRIPTIONS

#### Fundamentals of Health Policy (12 credit hours)

Fundamentals of Health Policy is a core course required for individuals participating in the Health Policy Certificate program. The core course is segmented into nine modules (outlines below) that are represented by independent courses to facilitate student matriculation and completion of the certificate program. The overall purpose of the course is to provide students with a fundamental knowledge and understanding of health policy issues and questions. This course may not be audited.

Course Director: Daniel Howard, Ph.D., Executive Director of the RWJ Center for Health Policy

Meeting Location: Meharry Medical College in the West Basic Sciences Building, Utmost Bound Room.

Meeting schedule:

Module	Day(s)	Time
1, 2 and 5	Tuesdays and Fridays	5:30 p.m. – 8:30 p.m.
3, 4 and 6-9	Tuesdays and Fridays	5:30 p.m. – 7:30 p.m.

### **Module 1: Mar 2<sup>nd</sup>-Mar 30<sup>th</sup>**

#### **Comparative Analysis of U.S. & International Health Care Systems**

The course examines health systems from a global perspective. The primary goal of the course is to enable students entering or working within a health care system to describe the parts of systems and their interactions, the environment in which the systems exist, and the internal and external forces, and points of leverage that create opportunities for change. Although health systems vary widely in their structure and performance, there is substantial similarity in the issues they face. Differences between systems are often a matter of degree. The course addresses health systems from a system improvement perspective, and focuses on health systems analysis and evaluation, and health system reform. The course examines metrics used to evaluate health systems and the various components of health systems, including financing mechanisms, payment schemes, workforce, and the organization of health care organizations. (2 credit hours)

### **Module 2: April 13<sup>th</sup>-May 14<sup>th</sup>**

#### **Health Policy and Society**

This course explores the intersection of societal change with health policy. The course incorporates numerous sociological theories (e.g., conflict, symbolic interaction, structural functionalism, etc.) to provide students with an introduction of health policy from societal standpoint. Students will become aware of the complexities of health policies and how it is oftentimes shaped by social change. This course is structured as a seminar. However, students will be actively engaged in discussions of relevant topics. (2 credit hours)

### **Module 3: June 1 -June 29<sup>th</sup>**

#### **Introduction to Epidemiology/Biostatistics**

**Epidemiology:** The overall purpose of this course is to introduce students to epidemiology so that they may understand how epidemiology contributes to: 1) identifying factors that cause diseases, 2) assessing the importance of diseases, 3) describing the natural history of diseases, and 4) evaluating procedures for preventing diseases. After completing this course, students should be able to understand the basic concepts, methods, and nomenclature of epidemiology, and the application of concepts and methods to current health problems. (1 credit hour)

**Biostatistics:** This course enables students to learn and apply basic principles and methodologies of statistical analysis. Students will gain insight into statistical reasoning, decision-making process, and scientific protocol applicable to the innovative health care delivery systems. Additionally, this course will apply descriptive techniques commonly used to summarize data; distinguish among the different measurement scales and the implications for selection of statistical methods to be used based on these distinctions; describe basic concepts of probability, random variation, and commonly used statistical probability distribution; and specify preferred methodological alternatives to commonly used statistical methods when assumptions are not met. (1 credit hour)

## **Module 4: July 6<sup>th</sup>-July 30<sup>st</sup>**

### **Health Policy and Law**

The theme of this course will be to focus on the complex integration of legislation, politics, finance, ethics, international awareness, and current events; in relation to the impact that each element has on the development and implementation of health policy, the conduct of research, and the delivery of healthcare in the United States. (1 credit hour)

## **Module 5: Aug 3<sup>rd</sup>-Aug 31<sup>st</sup>**

### **Health Economics**

This course provides a basic understanding of economic principles and methodology; it explains how economic principles and methodology apply to health policy. It explains the fundamental problems of economics and the unique aspects of the healthcare economy, and discusses key policy issues that economics, particularly microeconomics, helps to analyze and explain. (2 credit hours)

## **Module 6: Sept -7 Oct 1**

### **Introduction to Social Epidemiology**

This course provides a basic understanding of the socioeconomic and behavioral determinants of population and individual health and their distribution in the geo-space. It provides some history of the study of this relationship between population and individual health and place. (1 credit hour)

## **Module 7: Oct 5-Oct 22**

### **Environmental Health Policy**

Environmental health policy occupies a prominent position on both local and global agendas as old and new challenges confront the human race. There is a continual requirement for policies that will deal effectively with a seemingly never-ending supply of hazards, which impinge on health and wellbeing. This course provides a multidisciplinary window into environmental policy and its formulation. (1 credit hour)

## **Module 8: Oct 26-Nov 12**

### **Health Care Policy in the Genome Era**

Health Care Policy in the Genome Era is a seminar style course that will examine the policy issues that arise due to, or are influenced by, our increasing understanding of the content, complexity and applications of our human DNA sequence. Participants will get a broad grasp of health policy areas currently or potentially influenced by genetic technologies followed by more in-depth examination of particular areas as selected by the class. Discussions will include what we, as a society, have done in the past, what we are doing now, and where we may go next. (1 credit hour)

## Module 9: Nov 15-Dec 17

### Contemporary Ethical Issues in Health Policy

Contemporary Ethical Issues in Health Policy/Bioethics in Health is a seminar style course that will examine ethical issues arising from implemented health policies, and the role of ethics in determining health policies. (1 credit hour)

### National Scholars' Health Policy Issues Seminar—Health Policy Capstone

This course is designed to provide opportunities for students to be engaged by known health policy professionals and analysts. These renowned individuals will present seminars on contemporary health policy issues. Students will be given current health policy problems, which they will undertake, background research, acquire and analyze data and write brief "issue" papers on the health policy problems that will demonstrate their understanding of the material. Students must have completed modules 1-9 before they will be allowed to enroll in the capstone course. (3 credit hours)

Course Director: Daniel Howard, Ph.D., Executive Director of the RWJ Center for Health Policy

Meeting Location: Meharry Medical College, RWJF Center for Health Policy Conference Room

Meeting schedule:

Dates	Day(s)	Time
<b>Spring semester: Jan 3 - May 12, 2012</b>	Mondays and Wednesday	5 p.m. – 6:30 p.m.

### Health Disparities & Health Policy

This course will examine the challenges and methods in the implementation of health disparities research and interventions. It is intended to both complement and expand the knowledge gained in other courses by focusing specifically on minority/underserved populations. The course will explore readings and foster discussions that will include: ethics and research in minority/underserved communities; issues, barriers and facilitators to engaging minority/underserved communities in health research; examining basic research questions in minority health; understanding the application of research findings to program development; how to integrate theory and research, and issues and challenges of program implementation. An overarching goal is to increase awareness and knowledge of research on minority health, as well as unique issues to consider when engaging in public health research and practice in these communities. 3 credit hours, Fall.

### Summer Institute on Health Policy

#### **GSHP 701 The Challenges in Measuring Health Disparities: Politics, Policy and Methods -**

This course will discuss methodological issues around measuring health disparities and the costs of disparities, as well as the policy implications of this research. The course will address questions such as what is a disparity, how do investigators measure it, what are the data collection challenges, how have researchers overcome data and measurement problems, what is the impact of disparities, what are the kinds of policy strategies that are needed to address them, and how can researchers, advocates, and policymakers collaborate to build support for policy implementation. 2 credits hours

**GSHP 702 Race, Ethnicity and Health** – Fundamental to this course is the recognition of race and ethnicity as primary social determinants of health in the United States. The primary aim then is to explore the myriad social and behavioral factors that might underlie the associations among race, ethnicity, and health status outcomes. Because research designed to address this issue remains in its formative stages, the focus of the class will be: 1) To investigate state-of-the-science conceptual and methodological approaches to understanding social and behavioral determinants of health disparities; 2) To critically examine the fundamental scientific assumptions underlying health disparities research in an effort to better design future empirical approaches; 3) To characterize the potential intervention, prevention, treatment, and policy implications resulting from findings in the health disparities literatures. **2 credits hours**

**GSHP 703 Comparative Analysis of U.S. and International Health Care Systems** – This course examines health systems from a global perspective. The primary goal of this course is to enable students entering or working within a health care system to describe the parts of systems and their interactions, the environment in which the systems exist, and the internal and external forces, and points of leverage that create opportunities for change. Although health systems vary widely in their structure and performance, there is substantial similarity in the issues they face. This course addresses health systems from a system improvement perspective, and focuses on health systems analysis and evaluation, and health system reform. This course examines metrics used to evaluate health systems and the various components of health systems, including financing mechanisms, payment schemes, workforce, and the organization of health care organizations. **2 credits hours**

**GSHP 704 Achieving Health Equity: Frameworks, Data Tools, and Policy Interventions** - This course equips students with frameworks, data tools, and policy interventions to name, measure, and address the impacts of racism on the health and well-being of the nation. Lessons learned from understanding racism as a system of structuring opportunity and assigning value are generalized to provide understanding of other systems of structured inequity, including sexism, capitalism, nativism, and heterosexism. **2 credits hours**

## **Policies and Procedures**

### **Course Substitutions**

Considerations for course substitutions will be made when courses bear the same names or similar course descriptions. All substitutions will be handled on a case-by-case basis.

### **Attendance Policy**

The health policy certificate program will follow Meharry Medical College's attendance policy of 80 percent attendance. It is the responsibility of the student to familiarize him/herself with the policy and adhere to it.

### **Academic Performance**

It is understood that students' first responsibility should be to their regular matriculated Meharry program. Should a student fall below a 3.0 GPA in their regular academic program, he/she will be not be allowed to continue in the certificate program until his/her GPA returns to 3.0. The health policy certificate is not designed to interfere with degree programs, but rather to enhance.

The modules (courses) within the health policy program are Satisfactory/Unsatisfactory (S/U). Should a student fail more than one module, he/she will be dismissed from the program. Upon successful completion of the certificate program, students' transcripts for their regular degree programs will be noted with the completion of the health policy certificate.

## **School of Graduate Studies and Research Faculty**

### **Division of Biomedical Sciences**

**Associate Professors:** Virginia Brennan, Ph.D., Diana Marver, Ph.D.

**Assistant Professors:** Smita Misra, Ph.D., Siddharth Pratap, Ph.D., Amos Sakwe, Ph.D.

**Adjunct Associate Professor:** Marilyn E. Thompson, Ph.D.

**Adjunct Instructor:** Harry Taylor, Ph.D.

### **Department of Biochemistry and Cancer Biology**

**Chair and Professor:** Samuel E. Adunyah, Ph.D.

**Professors:** Salil K. Das, D.Sc., Josiah Ochieng, Ph.D., Manuel Valenzuela, Ph.D.

**Associate Professors:** Sakina E. Eltom, D.V.M., Ph.D., Aramandla Ramesh, Ph.D., LaMonica Stewart, Ph.D., J. Shawn Goodwin, Ph.D.

**Assistant Professors:** Zhenbang Chen, Ph.D., Chandravanan Dash, Ph.D.

### **Department of Internal Medicine**

**Professor:** Vladimir Berthaud, MD, MPH

**Associate Professor:** Waldemar Popik, PhD

### **Department of Microbiology and Immunology**

**Chair and Professor:** Fernando Villalta, Ph.D.

**Professors:** Gautam Chaudhuri, Ph.D., Robert G. Holt, Ph.D., Stella Nowicki, D.D.S., Raju Ramasamy, Ph.D.

**Associate Professors:** Donald Alcendor, Ph.D., Minu Chaudhuri, Ph.D., Bindong Liu, Ph.D.

**Assistant Professor:** Xinghong Dong, Ph.D.

### **Department of Neuroscience and Pharmacology**

**Chair and Professor:** Clivel G. Charlton, Ph.D.

**Professors:** Sanika S. Chirwa, Ph.D., Darryl Hood, Ph.D., Sukhbir S. Mokha, Ph.D.

**Associate Professor:** Twum-Ampofo Ansah, Ph.D.

### **Department of Professional and Medical Education**

**Associate Professors:** Carol Freund, Ph.D., Shyamali Mukherjee, Ph.D.

### **Department of Physiology**

**Interim Chair and Professor:** Hubert K. Rucker, Ph.D.

**Professor:** Ifeanyi J. Arinze, Ph.D.

**Associate Dean and Professor:** Evangeline D. Motley-Johnson, Ph.D.

**Associate Professor:** Anthony Archibong, Ph.D.

**Assistant Professor:** Eun-Sook Lee, Ph.D.

**Adjunct Associate Professor:** Habibeh Khoshbouei, Ph.D.

### **Division of Public Health Practice**

**Director and Professor:** William Washington, D.P.A., M.P.A., M.P.H.

**Associate Professor:** Chau-Kuang Chen, Ed.D., M.S.

**Assistant Professors:** Leah Alexander, Ph.D., Green Ekadi, Ph.D., Christine Ninja-Trupin, Ph.D., M.P.H., Vanisha Brown, Ph.D., Fatima Barnes, Ed.M.

**Faculty with Secondary Appointments:**

**Associate Professor:** Machelle Thompson, RDH, MSPH

**Assistant Professor:** Juanita F. Buford, Ed.D.

**Adjunct Professor:** William Paul, M.D.

**Adjunct Associate Professors:** Otis Cosby, M.D.; Kimberly Etheridge-Wyche, M.D.; Cherry Houston, Ph.D.

**Adjunct Assistant Professors:** Sanmi Areola, Ph.D.; William B. Rogers, Ph.D.

**Adjunct Instructors:** Alisah Haushalter, D.N.P., R.N.; Margaret Holleman, J.D.; Shri L. Mishra, M.P.H.

**Health Policy Certificate Program**

**Director and Assistant Professor:** Keydrone Guinn, Ph.D.

**Professor:** Daniel Howard, Ph.D., Executive Director of the Robert Wood Johnson Center for Health Policy

**Visiting Professors:** James F. Blumstein, L.L.B., Thomas LaVeist, Ph.D., David R. Williams, Ph.D.

# School of Medicine

## Administration

**Charles P. Mouton, M.D., M.S.**, Dean/Sr. Vice President for Health Affairs  
**Billy R. Ballard, D.D.S., M.D.**, Associate Dean, Lifelong Learning  
**Millard Collins, M.D.**, Interim Associate Dean, Student and Academic Affairs  
**Marquetta Faulkner, M.D.**, Associate Dean, Graduate Medical Education  
**Digna Forbes, M.D.**, Associate Dean, Education  
**Trea McMillan, CPA**, Associate Dean, Business and Finance  
**Chike M. Nzerue, M.D.**, Associate Dean, Clinical Affairs  
**Susanne Tropez-Sims, M.D.**, Associate Dean, Clinical Affiliations  
**Cassandra S. Ward, Ed.D.**, Associate Dean, Curriculum Evaluation and Chief of Staff  
**Brenda R. Merritt, M.P.A.**, Assistant Dean, Student and Academic Affairs  
**Sharon D. Turner-Friley, M.S.W.**, Assistant Dean, Special Programs

## Department Chairpersons

**Samuel E. Adunyah, Ph.D.**, Biochemistry and Cancer Biology  
**Rahn K. Bailey, M.D.**, Psychiatry and Behavioral Sciences  
**Billy R. Ballard, D.D.S., M.D.**, Pathology, Anatomy and Cell Biology  
**Xylina D. Bean, M.D.**, Pediatrics  
**George A. Breaux, M.D.**, Professional and Medical Education  
**Clivel G. Charlton, Ph.D.**, Neuroscience and Pharmacology  
**Lemuel Leon Dent, M.D.**, Surgery (Interim)  
**Anthony C. Dishner, M.D.**, Radiology  
**Gloria Richard-Davis, M.D.**, Obstetrics and Gynecology  
**Hubert K. Rucker, Ph.D.**, Physiology (Interim)  
**Duane Smoot, M.D.**, Internal Medicine  
**Fernando Villalta, Ph.D.**, Microbiology and Immunology  
**Roger J. Zoorob, M.D., M.P.H.**, Family and Community Medicine

## **Medical Education at Meharry Medical College**

The School of Medicine is the oldest and largest of the three schools at Meharry, and admits 105 students per year. The Graduate Medical Education Program has 96 approved positions in the specialties of Internal Medicine, Family & Community Medicine, Preventive and Occupational Medicine, Obstetrics & Gynecology and Psychiatry. In addition, students from the School of Dentistry and the School of Graduate Studies and Research receive training from School of Medicine faculty.

The School has thirteen (13) departments: Biochemistry and Cancer Biology, Microbiology and Immunology, Neuroscience and Pharmacology, Professional and Medical Education, Physiology Family and Community Medicine, Internal Medicine, Obstetrics and Gynecology, Pathology, Pediatrics, Psychiatry and Behavioral Sciences, Radiology and Surgery. The School also is home to nationally recognized centers that provide research, training and patient care in women's health and HIV/AIDS. The faculty and students actively serve the community through many programs involving mentoring, counseling and volunteer work to inspire and direct elementary, high school and college students to careers in the health professions.

The index teaching facility for the School of Medicine is the Nashville General Hospital at Meharry. Major affiliate training sites include the Veterans Administration Medical Center and Middle Tennessee Medical Center in Murfreesboro, Tennessee; Blanchfield Army Community Hospital at Fort Campbell, Kentucky; and Matthew Walker Comprehensive Health Center in Nashville. Additional clinical affiliates include Centennial Medical Center, Baptist Medical Center, several community health clinics, and numerous private practice sites in rural and urban underserved areas in the surrounding middle Tennessee area.

Although a historically black medical college, Meharry's student body reflects the diversity of the nation with representation from the Caucasian, Hispanic, Asian and Native American communities. The majority of Meharry's graduates keep the commitment of the principles upon which the College was founded by overwhelmingly choosing to practice in underserved urban and rural communities. Approximately 50 percent of the medical graduates select primary care specialties each year. Meharry continues to be proud of its leadership role in helping to ensure diversity in the nation's health professions work force.

### **Mission of the School**

The School of Medicine of Meharry Medical College pledges to offer a unique, quality, health science education to students of diverse origins, especially African Americans, with emphasis on addressing underserved populations. In addition, the School of Medicine will teach and monitor excellence in the delivery of primary or holistic care, provide a foundation for life-long learning, and conduct research relevant to the health of the disadvantaged.

### **Goals and Objectives of the Program**

The educational outcomes/objectives of the program of medical education leading to the M.D. degree emphasizes educational excellence, patient care, communication, professionalism, primary care, technology, and life-long learning. The candidate for the M.D. degree will be required to show competence in each of these areas, as follows:

#### **Educational Excellence**

1. Demonstrate the acquisition and a thorough understanding of basic and clinical science knowledge in relationship to the normal and abnormal biological and physiological processes as applied to the practice of medicine.

2. Demonstrate an understanding of the impact of ethical, social, cultural, psychological, and economic factors that affect the management, prognosis, and prevention of disease as applied to clinical care.

#### **Patient Care**

3. Demonstrate clinical proficiency and the ability to use diagnostic technologies by obtaining a comprehensive medical history, performing a thorough physical examination, and formulating a differential diagnosis with appropriate course of therapy and management plan.

#### **Professionalism**

4. Demonstrate the ability to acquire and apply new knowledge, through the evaluation of medical literature in relationship to the practice of medicine and medical research.
5. Demonstrate knowledge of issues utilizing universal standard precautions in patient care when promoting health and disease prevention.
6. Demonstrate the ability to apply appropriate ethical and legal principles and professional conduct as they relate to patient care.

#### **Primary Care**

7. Demonstrate the knowledge, skills, attitudes, and behaviors necessary to perform as generalist clinician.

#### **Technology**

8. Demonstrate computer literacy as applied to and utilized in internal and external outcome assessments, certification/licensure examinations, and patient care.

#### **Life-long Learning**

9. Demonstrate continuing clinical proficiency and competency in medical practice through the utilization of acquired knowledge, and skills resulting from the process of life-long learning.

### **Strategic Goals for Educational Excellence**

The School of Medicine's strategic goals, which specifically address educational excellence include:

1. To provide a comprehensive medical educational program that meets the accreditation standards of the Liaison Committee on Medical Education.
2. To graduate students who are professionally competent, prepared to enter and complete graduate medical education qualified for licensure.
3. To provide a program in medical education rooted in the realities of emerging health care reform and the ethics of health care.

4. To enhance the quality of all accredited residency training programs and improve the educational experiences of our undergraduate matriculants, as well as the quality of resident participation in each of the required undergraduate clerkships.
5. To strengthen the existing biomedical sciences program leading to the Ph.D. degree and the combined M.D./Ph.D. degrees.
6. To sustain and enhance programs in continuing medical education.
7. To establish and maintain a caring, nurturing, and compassionate environment conducive to the successful personal and professional development of students.
8. To develop and implement model recruitment programs and academic enrichment services aimed at improving the quality of the accepted applicant pool and rates of retention and progression.

## **Academic Program**

The School of Medicine is organized into 14 departments that administer the instructional, research and clinical activities of the School. The clinical departments include Family and Community Medicine, Internal Medicine, Neurology, Obstetrics and Gynecology, Pathology, Pediatrics, Psychiatry and Behavioral Sciences, Radiology and Surgery. The basic science departments include Biochemistry and Cancer Biology, Microbiology and Immunology, Neuroscience and Pharmacology, Professional and Medical Education and Physiology.

The School of Medicine offers a four-year medical education program curriculum. The curriculum promotes a high degree of personal contact between faculty and students.

### **The Curriculum**

The integrated curriculum leading to the M.D. degree is a four-year program that is divided into two phases. As previously stated, Phase I consists of the first two years, generally referred to as the Basic Sciences years. However, preceding the start of the first year, all entering freshmen are required to participate in a summer program called, Mini-Academic Program for Success (MAPS). The overall objective of this program is to provide students with basic science information that is foundational for their overall success in medical school, especially during the first year. Students also receive instruction in the areas of bio-informatics, ethics, basic computer skills, test-taking and time management skills. The overall goal of the first year of Phase I is to provide students with a strong background in basic science knowledge, clinical and social skills that are essential for the practice of medicine in the twenty-first century. Individual, discipline-specific courses have been eliminated and replaced by block modules in which basic, clinical and social sciences are presented in an integrated manner to facilitate learning and to meet the overall objectives of the educational program. The overall goal of the second year of Phase I is to provide the opportunity for more in-depth learning of the basic sciences by organizing instruction around a series of organ systems.

During Phase II, the last two years, junior students are randomly assigned to six clinical rotations: internal medicine, obstetrics and gynecology, pediatrics, surgery, psychiatry and family medicine. The senior clinical rotations are divided into clerkships (selectives) and electives. Eight clinical rotations of four weeks each are required to complete the senior year. The required rotations are internal medicine, radiology, psychiatry/neurology, senior family medicine and electives that include four units (sixteen weeks). One of the four units of electives will include recently developed course entitled Capstone.

Additionally, an Intersession course has been established. The intersession modules are three (3) one-week course blocks designed to revisit, reinforce, and integrate essential basic science concepts into the day-to-day practice of medicine.

Junior and senior clinical clerkships are taken at the Alvin C. York Medical in Murfreesboro, Tennessee, Nashville Veterans Administration (VA) Medical Center, Nashville General at Meharry, Blanchfield Army Hospital in Fort Campbell, Kentucky and/or one of the affiliated sites approved by the department.

A five-year curriculum is available to students who show signs of academic difficulty during MAPS, the academic year or have personal hardships. For these students, the first-year curriculum is divided into a two-year period of matriculation offering students reduced study loads. However, the remaining years of the program are consistent with that of the regular program.

## **The Comprehensive Medical Review Program (CMRP)**

The CMRP is an extensive review of the basic sciences to prepare students to take the United States Medical Licensure Examination (USMLE) Step 1 and Step 2 Clinical Knowledge (CK). The course provides participants with concentrated reinforcement and review, as well as access to several question banks with items similar to those seen on USMLE Steps 1 and 2. Students are encouraged to utilize these items on a daily basis following pre-assessment. A battery of discipline-specific comprehensive exams and practice tests are also used to profile each participant's performance. Individual counseling is affected by utilizing the performance profiles (measured outcomes), enabling feedback and direction for self-study and by providing information to the skills specialist for test-taking mechanics. This customized approach assures the individual adequate time for preparation to eliminate cognitive weaknesses while providing a mechanism to measure proficiency in each area to guide certification progression, graduation and ultimately licensure.

## **Admissions**

### **Applications**

The School of Medicine at Meharry Medical College participates in the American Medical College Application Service (AMCAS). Applicants to Meharry Medical College must instruct AMCAS, Association of American Medical Colleges (AAMC), Section for Student Services, 2450 N. Street, N.W., Suite 201, Washington, D.C. 20037-1131, to forward their files to the Office of Admissions and Recruitment, Meharry Medical College, 1005 Dr. D.B. Todd, Jr. Blvd., Nashville, TN 37208-3599.

Upon receipt of the AMCAS application, persons who pass the preliminary screening are sent supplemental applications so that the evaluation process may continue. Applicants are required to submit the electronic supplemental application to the Office of Admissions and Recruitment by January 15 of the year in which admission is sought. All supplemental applications must be accompanied by an electronic processing fee of \$65. This fee is not refundable, nor can it be credited toward tuition, if applicant is accepted.

The Admissions Committee reviews all applications. Candidates presenting credentials that do not meet the minimum requirements are so advised by the director of Admissions and Recruitment at the direction of the committee. Each candidate who presents the minimum requirements is evaluated competitively and is either accepted, placed on the alternate list, or rejected. The director of Admissions and Recruitment notifies the applicant of the committee's action.

Applicants accepted for matriculation are allowed three weeks to accept the invitation to attend Meharry Medical College and to submit a \$300 deposit. This deposit is applied to the tuition of the matriculating student. If the student withdraws the application prior to April 15, two-thirds of the deposit (\$200) is refunded.

The Admissions Committee will consider candidates with the following qualifications:

1. Bachelor's degree from an approved postsecondary school or its equivalent is recommended.
2. At least four full academic years of acceptable college credit earned in a college or institute of technology currently approved by an agency recognized by the Association of American Medical Colleges and by the Council on Medical Education of the American Medical Association. These agencies are:
  - North Central Association of Colleges and Secondary Schools
  - Middle States Association of Colleges and Secondary Schools
  - New England States Association of Colleges and Secondary Schools
  - Northwest Association of Colleges and Secondary Schools
  - Western Association of Colleges and Secondary Schools
  - Southern Association of Colleges and Secondary Schools
3. The satisfactory completion of three years of pre-medical education by December 15 deadline. Courses and credits include:

General Biology or Zoology with laboratory	8 semester hrs. - 12 quarter hrs.
Inorganic chemistry with qualitative analysis and laboratory	8 semester hrs. - 12 quarter hrs.
Organic Chemistry with laboratory	8 semester hrs. - 12 quarter hrs.
General Physics with laboratory	8 semester hrs. - 12 quarter hrs.
English Composition	6 semester hrs. - 9 quarter hrs.

Students who do not satisfactorily complete required college courses are not accepted.

"Satisfactory Completion" of required courses is interpreted by the Admissions Committee as an average grade of at least "C" in each subject field. "Satisfactory Completion" of three years of pre-medical education is interpreted as an average grade of at least "C" for the entire work of the three years. No student who has attained a general college average falling below "C" will be eligible for consideration.

It is recommended that the applicant supplement the basic requirements with courses in the humanities and the natural and social sciences designed to promote broad cultural development. It is recommended that elective courses be selected from such subjects as general botany, comparative anatomy, quantitative analysis, physical chemistry, mathematics, economics, history, psychology, sociology, foreign languages, philosophy, fine arts and logic. Highly specialized courses that occur in the undergraduate curriculum such as neuroanatomy, histology, human anatomy, bacteriology and physiology may not be substituted for courses generally required for entry to medical school.

Students are considered on a competitive basis in terms of scholarship and academic record, character, MCAT scores, general fitness to be a physician, and overall potential to serve the stated mission of the college. Additional materials necessary to activate the application process include favorable recommendations from pre-medical advisers or from two instructors in the natural sciences and one other faculty member.

## **Reapplications**

Applicants who are not accepted in a given year, or any matriculated student who has officially withdrawn or been dismissed and not readmitted through the appeals process, must reapply if they wish to enter in a subsequent year. Such applicants must meet all requirements in force at the time of reapplication.

## **Applicants Requesting Transfer with Advanced Standing**

Open slots in the School of Medicine for transfer into the second or third year classes are rare. To be eligible to apply for transfer into the second and/or third year, a student must be enrolled and in good academic standing at a Liaison Committee on Medical Education (LCME) accredited medical school. Transfers are considered on a case-by-case basis and normally granted only in cases of severe/personal hardship. Students who have been dismissed from another medical school for academic or disciplinary reasons, or who have withdrawn voluntarily are not encouraged to apply. The deadline for application for transfer is April 15 of the calendar year in which the student hopes to enter medical school. For additional information, contact the Office of Admissions.

## **Interviews**

No applicant is accepted until interviewed by members of the Admissions Committee or its designees. Applicants should not present themselves for interviews until requested to do so by the Committee.

## **Early Decision Program**

Meharry strongly sanctions participation in the Early Decision Program. Under this program, an applicant applies only to Meharry and is guaranteed prompt notification by October 1 of either acceptance or rejection. All required application materials and official transcripts must be received by AMCAS by August 1. If not accepted under the Early Decision Program, the applicant may be considered as a regular candidate and may then apply to other schools.

It is the applicant's responsibility to have a report of his/her performance on the MCAT submitted to the Office of Admissions and Recruitment. The test should be taken in the spring of the junior year. Arrangements should be made by the applicant at the institution where he/she is presently enrolled. The MCAT must have been taken within the past three years.

## **The Medical Scholars Program**

The Medical Scholars Program is offered jointly by the School of Medicine and School of Graduate Studies and Research. Participants have the option of pursuing a combined course of study leading to a dual M.D./Ph.D. degree. It is expected that all pre-medical education courses will be taken at an approved college in the United States.

Highly qualified applicants to the School of Medicine identified based on MCAT scores, grade-point averages, personal interviews, letters of recommendation and research experiences, are recruited as participants in the Medical Scholars Program.

The Medical Scholars Program is a program that students will follow during their matriculation in medical school. During the first regular year of medical study – usually the most arduous because of the heavy didactic course load and the difficult transition from undergraduate to medical school – Medical Scholars follow the standard medical curriculum, with special but limited additional assignments, whereby they are able to participate in special activities that do not require out-of-class preparation, such as graduate seminars in biomedical sciences. Beginning

with the summer between the first and second year and during the three full years thereafter, students will work closely with faculty research preceptors – either clinical or basic scientists – on research projects and assignments. It is expected that students in this program publish the results of their research on peer-reviewed journals.

## **BS/MD Program**

In order to increase the number of culturally competent African-American physicians serving the medically underserved population as well as to help alleviate health-care disparities, Meharry Medical College established the Bachelor of Science/Doctor of Medicine [BS/MD].

The program begins in the summer following the freshmen year at a Historically Black College or University [HBCU] and will continue during the summer of each year of college. Each level consists of a six-week summer enrichment program with courses sequenced to provide a preview of the most difficult courses in the upcoming year. Participants will receive conditional acceptance into Meharry's School of Medicine upon successful completion of the program.

Through linkages with seven HBCUs [Alabama A & M, Fisk, Grambling, Jackson State, Hampton, Southern, and Tennessee State University], students who matriculated into these universities majoring in the Biological Sciences or Chemistry and who maintained a 3.25 GPA throughout their freshman year are invited to participate in the Summer Enrichment Program at Meharry Medical College. These students are selected by the Site Coordinators [pre-med advisors] at each university based on the coordinator's personal knowledge of the students as well as the students' potential to succeed in the program as evidenced by above-average SAT or ACT scores and strong academic performance at the undergraduate level.

Students are provided with student mentors from Meharry to assist with their acclimation and orientation. Courses usually taught are Pre-Calculus, Cell Biology, Organic Chemistry, Physics, Computer Literacy, Medical Terminology, and English. Rising seniors participate in the MCAT Preparation Course

## **Dual Degree Programs**

Meharry's first dual degree program, the Fisk-Meharry Joint Program in Biomedical Sciences (JPBS), was established in 1992. Participation in the (JPBS) means joint admission to the undergraduate school and Meharry Medical College. This program is designed for talented young men and women who desire to become physicians, dentists, or researchers in the biomedical sciences. JPBS scholars follow a prescribed program of study and are expected to maintain high academic standards throughout their tenure in the program. The program involves three years of study at the undergraduate school, successful completion of the fourth year (first year at Meharry) and satisfactory completion of the requirements for the baccalaureate degree from the undergraduate school, in either biology or chemistry. Normal progress dictates that M.D. or D.D.S. degree requirements will be completed at Meharry during the next three years. Thus, both the bachelor's degree and the professional degree requirements can be completed in seven years. The time to complete the Ph.D. or M.D./Ph.D. will vary.

Dual Degree Programs have been established at Albany State College, Tennessee State University and the following Historically Black United Methodist Schools: Bennett College, Clark Atlanta University, Claflin College, Dillard University, Huston-Tillston University, Paine College, Philander Smith College, Rust College, and Wiley College. The colleges and universities operate their programs similar to the Fisk-Meharry Joint Program in Biomedical Sciences. Students interested in the opportunity to participate in this kind of program should contact one of the undergraduate institutions listed for information.

## Technical Standards for Admission

Medical education requires that the accumulation of scientific knowledge be accompanied by the simultaneous acquisition of skills and professional attitudes and behavior. Medical school faculties have a responsibility to society to matriculate and graduate the best possible physicians. Thus, admission to medical school is offered to those who present the highest qualifications for the study and practice of medicine. Technical standards presented in this document are prerequisite for admission to and graduation from the School of Medicine at Meharry Medical College. All courses in the curriculum are required in order to develop the essential skills required to become a competent physician.

Graduates of medical schools must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. The School of Medicine at Meharry Medical College acknowledges Section 504 of the 1973 Vocational Rehabilitation Act and PL 11-336, the Americans with Disabilities Act (ADA) 1993, but ascertains that certain minimum technical standards must be present in prospective candidates.

A candidate for the M.D. degree must have aptitude, abilities and skills in six areas: observation, communication, motor, conceptual, integrative and quantitative, and behavioral and social. Technological compensation can be made for some handicaps in these areas, but a candidate should be able to perform in a reasonably independent manner, without assistance. The use of a trained intermediary means that a candidate's judgment must be mediated by someone else's power of selection and observation. Therefore, third parties cannot be used to assist students in accomplishing curricular requirements in the six skill areas specified.

**Observation:** The candidate must be able to observe demonstrations and participate in experiments in the basic sciences including, but not limited to, physiologic and pharmacologic demonstrations in animals, microbiologic cultures and microscopic studies of micro-organisms and tissues in normal and pathologic states. A candidate must be able to observe a patient accurately at a distance and close at hand. Observation requires not only the use of the sense of vision, but other sensory modalities as well. It is enhanced, for example by the sense of smell.

**Communication:** A candidate should be able to speak, to hear and observe patients in order to elicit information; describe changes in mood, activity and posture; and perceive nonverbal communications. A candidate must be able to communicate effectively and with sensitivity toward patients. Communication includes not only speech, but also reading and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the health care team.

**Motor Coordination and Function:** Candidates should have sufficient motor function to elicit information from patients by palpation, auscultation, percussion and other diagnostic maneuvers. A candidate should be able to perform basic laboratory tests (urinalysis, CBC, etc.), carry out diagnostic procedures (protoscopy, paracentesis, etc.) and read EKGs and X-rays. A candidate should be able to execute motor movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of physicians are cardiopulmonary resuscitation, the administration of intravenous medication, application of pressure to stop bleeding, opening of obstructed airways, suturing of simple wounds and performance of simple obstetrical maneuvers. Such actions require coordination of both gross and fine muscular movements, equilibrium and functional use of the senses of touch and vision.

**Intellectual/Conceptual, Integrative and Quantitative Abilities:** These abilities include measurement, calculation, problem reasoning, analysis and synthesis. Problem solving

and the critical skill demanded of physicians require all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand the spatial relations of structures.

**Behavioral and Social Attributes:** Candidates must possess the emotional health required for full use of their intellectual abilities, the exercise of good judgment, the prompt completion of all responsibilities attendant to the diagnosis and care of patients and the development of mature, sensitive and effective relationships with patients. Candidates must be able to tolerate physically taxing workloads and to function effectively when stressed. They must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Empathy, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities that should be assessed during the admission and education processes.

Candidates for the M.D. degree must have somatic sensation and the functional use of the senses of vision and hearing. Candidate's diagnostic skills will also be lessened without the functional use of the senses of equilibrium, smell or taste. Additionally, they must have sufficient exteroceptive sense (touch, pain and temperature), sufficient proprioceptive sense (position, pressure, movement, stereognosis and vibratory) and sufficient motor function to permit them to carry out the activities described in the section above. They must be able to consistently, quickly and accurately integrate all information received by whatever sense(s) employed and they must have the intellectual ability to learn, integrate, analyze and synthesize data.

The Meharry Medical College School of Medicine will consider for admission any applicant who demonstrates the ability to perform or to learn to perform the skills listed in this document. Students will be judged not only on their scholastic accomplishments, but also on their physical and emotional capacities to meet the full requirements of the school's curriculum and to graduate as skilled and effective practitioners of medicine. The following technical requirements apply:

1. The candidate is able to observe demonstrations and participate in experiments in the basic sciences.
2. The candidate is able to analyze, synthesize, extrapolate, solve problems and reach diagnostic and therapeutic judgments.
3. The candidate has sufficient use of the senses of vision and hearing and the somatic sensation necessary to perform a physical examination and perform palpation, auscultation and percussion.
4. The candidate can reasonably relate to patients and establish sensitive, professional relationships with them.
5. The candidate can communicate the results of an examination to the patient and to colleagues with accuracy, clarity and efficiency.
6. The candidate can learn and perform routine laboratory tests and diagnostic procedures.
7. The candidate can perform with precise, quick and appropriate actions in emergency situations.
8. The candidate displays good judgment in the assessment and treatment of patients.
9. The candidate possesses the perseverance, diligence and consistency to complete the medical school curriculum and to enter the independent practice of medicine.
10. The candidate is able to accept criticism and respond with the appropriate modification of behavior.

## Academic Regulations

### Requirements for M.D. Degree

A student is deemed eligible for the M.D. degree after satisfactorily completing all graduation requirements outlined in the Student Academic Policies and Procedures Manual, School of Medicine, including the successful completion of the prescribed course work and attainment of passing scores on the USMLE Step 1, Step 2 Clinical Knowledge and Step 2 Clinical Skills.

An affirmative vote of the executive faculty of the School of Medicine with concurrence of the dean and confirmation by the Board of Trustees is required for candidacy for the M.D. degree. Students who do not complete graduation requirements prior to commencement will receive diplomas when all requirements are completed, at alternative dates approved by the Board of Trustees.

### Examination and Grades

Examinations will be scheduled by each Department and coordinated centrally by the Department of Professional and Medical Education for the preclinical years, and on a departmental basis during the clinical years.

The definitive evaluation of the student's work is expressed by A, B+, B, C+, C or F which appears on his/her official transcript and on the report from Banner given to each student at the end of each semester. All clinical departments are required to provide a departmental narrative evaluation (electronic and hard copy) along with a letter grade for all clinical students. All grades are to be submitted to Banner within five (5) working days following receipt of subject board scores by the department (*for more information, see Student Academic Policies and Procedures Manual for the School of Medicine*).

### Change of Grade

A change of grade can be made only upon recommendation of the departmental chairperson with approval of the Interim Associate Dean for Student/Academic Affairs. A recommendation for change of grade must include appropriate reasons for the change request.

### Grades for Off Campus Courses

Students taking courses away from Meharry for remediation or for selective/electives in the case of clinical courses will be governed by the grading system (scale) of that institution or course. In the case of preclinical courses, students who pass a course taken away from the institution must also pass the respective subject board of that discipline at the level required by the Meharry department. Thus, if the student passes the away course and the NBME subject board at Meharry, the final grade received will be that awarded by the Meharry department.

### Subject Boards

All students must score  $\geq 60$  (or the passing level determined by the Department) on each NBME Subject Board offered in both the preclinical and clinical years. Students who do not pass the subject board on first take will receive an incomplete "I" grade. Students failing to obtain a passing score will be required to repeat the subject board examination after remediation. The type of remediation that is to occur is left to the discretion of the individual department. All incomplete grades must be removed prior to sitting for any of the USMLE Step examinations. Student eligibility to sit for a subject board is determined by the individual department. Students

must pass both the internal component of a course and the subject board to obtain a passing grade.

## **Leave of Absence**

A leave of absence is an interruption of the normal course of study requested by a student, requiring prior written approval by the dean or his/her designee. A student's leave of absence shall not extend beyond one calendar year. The official date of leave shall not antedate the date of the student's request. An official leave of absence form must be processed and can be obtained from the Office of Student/Academic Affairs.

A leave of absence may be granted upon receipt of a written request for reasons of illness, personal and/or family exigencies, financial straits, emotional states and other similar types of situations. The Interim Associate Dean for Student/Academic Affairs may require documentation to accompany a request. If the situation is appropriate, the Interim Associate Dean for Student/Academic Affairs may place a student on an Administrative Leave of Absence. A student must request in writing termination of Leave of Absence for reinstatement to active status. Extensions may be requested not to exceed one additional year. Failure of such requests will result in automatic dismissal or administrative withdrawal.

## **Academic Standards and Policies**

All students are required to meet the current academic standards found in the Student Academic Policies and Procedures Manual, School of Medicine. The manual is provided to all matriculating students. Additional copies can be obtained in the Office of Student/Academic Affairs located in the Harold D. West Basic Sciences Center or viewed on Blackboard.

## **Student Evaluation and Promotion**

The Student Evaluation and Promotion Committee reviews student progress and makes recommendations regarding student advancement (*for more information, see Student Academic Policies and Procedures Manual of the School of Medicine*).

If at the completion of one year's curriculum, a student has received a passing grade in all courses, the student will be promoted to the next academic level. If a student receives a grade of F in one or more courses which have a total number of credit hours less than or equal to 11 credit hours within a given academic year, the student will be required to repeat the course(s) failed in either summer or the academic year immediately following receipt of failure

Any student receiving a grade of F in courses totaling greater than or equal to 12 credit hours within the academic year will be required to repeat the courses failed in the academic year following receipt of the failures, or will be required to repeat the entire academic year based upon the assessment of the student's academic record and the recommendation of the Committee. During the academic year following, the student will be put on academic probation; he or she will be counseled and reevaluated at the end of that academic year (*additional information regarding this policy may be found in the Student Academic Policies and Procedures Manual of the School of Medicine*).

## **Academic Standing**

A student at Meharry Medical College is in good academic standing if he/she is properly registered with the Office of Admissions and Records and is unencumbered by pending action of the Office of Dean Pursuant to recommendations from the Student Evaluation and Promotion Committee arising from academic or other difficulties.

## **Satisfactory Academic Progress**

In order to remain in good standing, a student enrolled in the School of Medicine must maintain a cumulative grade point average of a minimum of 2.0 (C average). Any student who fails to maintain a cumulative academic average established by the School to be considered in good academic standing will automatically be placed on probation.

No student may remain on probationary academic status any longer than one (1) semester and must be counseled when any probation status is established by the Interim Associate Dean for Student/Academic Affairs. No student will be allowed to remain on probation for more than two (2) semesters throughout his or her entire matriculation without being considered for dismissal by the Student Evaluation and Promotion Committee.

Depending on whether or not the student is permitted to enroll in the next regular semester or a subsequent semester, the time permitted for achieving the minimal cumulative grade point average or good academic standing will be limited to one academic year. Any exception to this policy must be justifiable and approved by the Student Evaluation and Promotion Committee and dean of the School of Medicine with stated reasons for such exception. The academic policies established by the School of Medicine for evaluation of a student's academic progress and standing, along with the judgment of the dean as to the student's aptitude and suitability for continued enrollment, will be weighed in arriving at a policy exception decision.

## **Dean's List**

This list is compiled by the Student Evaluation and Promotion Committee for approval by the dean. A student shall be eligible for the Dean's List at the end of each academic year if he/she uniformly does outstanding work. Students achieving a weighted grade point average between 3.50 and 4.00 for a given year's curriculum shall be eligible for the Dean's List for that year. Freshman students in the five-year program are not eligible for the Dean's List until they have completed the Freshman 2 year.

## **Honors**

The Student Evaluation and Promotions Committee will choose students to be recommended for graduation with honors based on their entire scholastic record. A minimum cumulative GPA of 3.5 is required for consideration for graduation with honors. The dean reviews the recommendations and determines the recipients of honors, prizes and awards. The Committee's action shall be based upon (a) the rules of the College, (b) the regulations of the School of Medicine, and (c) the conditions set forth by the donors of prizes.

The criteria for graduating with Honors are as follows:

Highest Honors	3.945-4.00
High Honors	3.745-3.944
Honors	3.445-3.744

## **Withdrawal from a Course**

When a student wishes to withdraw from a course, he/she shall obtain the appropriate form from the Assistant Dean in the Office of Student/Academic Affairs.

A student will not be permitted to withdraw from a course except for unusual or extenuating circumstances beyond the student's control, which make it impractical or impossible to complete the course. The Interim Associate Dean for Student/Academic Affairs may require documentation

to accompany a request for withdrawal. Poor academic performance alone does not constitute sufficient basis for withdrawal from a course.

## **Withdrawal from the College**

A student may withdraw from Meharry Medical College after filing an official Withdrawal Form with the Office of Student/Academic Affairs, and then having the form properly executed, by the Office of Records. The student's total performance in all courses will be evaluated at the time of the requested withdrawal in accordance with the policies of the School. Based on the review of the student's performance, he/she may be dropped from the College for poor academic performance. Grades for completed courses shall be recorded on the official transcript. Should the student seek to return to Meharry Medical College following withdrawal, a formal application must be filed with the Office of Enrollment Management and the regular application process followed.

## **Student Dismissal**

The School of Medicine reserves the right to dismiss a student at any time for violation of the student conduct policy, inadequate academic performance and upon determination that a student is, for any reason, unfit to continue as a student or as a potential practicing physician. When a student is recommended for dismissal by action of the Student Evaluation and Promotion Committee, the formal Procedures for Review and Appeal of Academic Dismissal Action policy should be followed.

## **Request for Transfer from the School of Medicine**

All activities regarding transfers must occur through the Office of Student/Academic Affairs. Requests for letters of recommendation required for a transfer must be made in writing with a clear statement of the reasons for considering the transfer. Students must have a conference with the senior associate dean for student/academic affairs. Students must present written certification by the Treasurer's Office that no outstanding indebtedness to the College exists, before any letters of recommendation will be forwarded. Letters of recommendation will reflect the academic standing of the student only. Failure to comply with the requirements for transfer will result in non-concurrence with the transfer.

## **School of Medicine Academic Calendar 2012-2013**

M2 Registration – Summer Research Eligible	Mon., June 4, 2012
M3 Orientation	Fri., April 27 – Mon., April 30, 2012
First Year Orientation/Registration	Mon., June 25 – Thurs., June 28, 2012
M4 Registration	Fri., June 22, 2012 (after subject boards)
M3 Registration	Fri., June 29, 2012
MAPS Classes Begin	Fri., June 29, 2012
M3 Rotations Begin	Mon., July 2, 2012
M4 USMLE, Step 2 Kaplan Review Begins	Mon., July 2, 2012
4 <sup>th</sup> of July Holiday	Wed., July 4, 2012
M4 USMLE, Step 2 Kaplan Review Ends	Fri., July 27, 2012
MAPS Classes End	Fri., August 3, 2012
M2 Registration – Not Summer Research Eligible	Mon., August 6, 2012
M2 Classes Begin	Tues., August 7, 2012

First Year Classes Resume	Mon., August 6, 2012
White Coat Ceremony	Fri., August 17, 2012
Family & Friends Weekend	Fri., Aug. 17 – Sat., Aug. 18, 2012
Labor Day Holiday	Mon., September 3, 2012
Constitution Day	Mon., September 17, 2012
Convocation	Mon., October 15, 2012
Thanksgiving Holiday	Thurs., Nov. 22 – Fri., Nov. 23, 2012
Fall semester ends	Fri., December 21, 2012
Grades Due in Banner/Registrar's Office	Fri., January 4, 2013
Spring Classes Begin	Thurs., January 3, 2013
ML King Remembrance Program	Fri., January 18, 2013
ML King, Jr. Day Holiday	Mon., January 21, 2013
Student Research Day	Wed., March 13, 2013
MATCH Day	Fri., March 15, 2013
Spring Break (M4)	Mon., March 18 – Fri., March 22, 2013
Spring Break (M1 & M2)	Mon., March 25 – Thurs., March 28, 2013
Good Friday – Meharry Holiday	Fri., March 29, 2013
Spring Break (M3)	Mon., April 1, 2013
M2 Classes/Exams End	Fri., April 26, 2013
M2 USMLE, Step 1 Kaplan Review Begins	Mon., April 29, 2013
M2 Class Grades Due	Fri., May 10, 2013
M1 Classes/Exams End	Fri., May 24, 2013
M2 USMLE, Step 1 Kaplan Review Ends	Fri., May 24, 2013
Commencement	Sat., May 18, 2013
Memorial Day Holiday	Mon., May 27, 2013
M1 Grades Due	Fri., May 31, 2013
M3 Rotations End	Fri., June 21, 2013
M1 Summer Session (Remediations)	Mon., June 10 – Fri., July 26, 2013
M2 Summer Session (Remediations)	Tues., May 28 – Fri., June 28, 2013

#### Calendar Summary By Class

M1 (including MAPS)	Mon., June 25, 2012 – Fri., May 24, 2013
M2 Summer Research Eligible	Mon., June 4, 2012 – Fri., May 24, 2013 (includes Kaplan)
M2 Not Summer Research Eligible	Mon., August 6, 2012 – Fri., May 24, 2013 (includes Kaplan)
M3	Mon., July 2, 2012 – Fri., June 28, 2013
M4 Registration Only	Fri., June 22, 2012 (after subject boards)
M4 Classes Begin	Mon., July 2, 2012 – Fri., May 18, 2013 (includes Kaplan)

## Financial Information

### Tuition and Fees

Tuition for the School of Medicine for the academic year 2012-2013 is \$40,695.

Tuition and fees are set annually by the Board of Trustees and are subject to review and change without notice.

The tuition and fees by year are as indicated below:

	Year 1	Year 2	Year 3	Year 4
<b>Tuition</b>	\$ 40,695	\$40,695	\$40,695	\$40,695
<b>Total fees</b>	\$ 7,731	\$ 7,328	\$ 7,370	\$ 5,782
<b>Total Tuition and Fees</b>	\$ 48,426	\$ 48,023	\$48,065	\$46,477

## COURSE DESCRIPTIONS

### BASIC SCIENCES: DEPARTMENT OF PROFESSIONAL AND MEDICAL EDUCATION

#### Mini Academic Program for Success (MAPS)

## COURSE DESCRIPTIONS

**ASM.D. 230 – Mini Academic Program for Success (MAPS)** is an intensive six-week academic program, required for all incoming first year medical students. MAPS is designed to provide freshman medical students with a head start on first year basic science core courses of the medical school curriculum. The main goals of the MAPS Program are to: (1) introduce incoming medical students to the rigors of professional school in a supportive but realistic environment; (2) identify potential academic challenges, strengths and weaknesses of students prior to the beginning of the Fall semester and (3) design individualized intervention strategies based on student performance on examinations, with the aim of maximizing student retention and progression in medical school.

The courses offered during the MAPS Program include:

**Biochemistry/Cell Biology (BCB/MCBG):** The BCB mini course continues into the Fall semester as the Molecular Cell Biology and Genetics (MCBG) course. The main objective of the mini course is to introduce students to basic concepts in medical biochemistry, human genetics, molecular cell biology and basic histology, relevant to human life processes. The medical biochemistry and genetics topics will be presented with clinical correlations, and they will provide students with excellent integrative tools to comprehend the inheritance patterns, and the molecular and biochemical basis of human diseases. The basic histology and cell biology component of BCB, will focus not only on microscopic structure but also on structure-function relationships at the cell and tissue levels, and it will incorporate many important fundamental concepts in anatomy, embryology, neurobiology, pathology, and biochemistry.

**Introduction to Clinical Anatomy (ICA/GAE):** The ICA mini course is intended to provide students with a fundamental knowledge and understanding of the basic concepts of human anatomical sciences and radiology, in preparation for the more advanced Gross Anatomy and Embryology (GAE) course offered in the Fall semester.

#### Division of Clinical Skills and Competency

**Foundations in Clinical Medicine (FICM/PPM).** The FICM mini course, which continues into the Fall semester as Principles and Practice of Medicine (PPM), is designed to introduce students to the profession of medicine and it will focus on areas of the profession including (1) the responsibilities and competencies required of a medical student and a physician, (2) the skills

necessary to succeed in the practice of clinical medicine, and (3) the ethical and legal considerations relating to medical student/physician interactions with patients. **(4 credit hours)**

**ASM.D. 311 Principles and Practice of Research (PPR).** This course will introduce students to a clear understanding of the scientific method. Activities include assembly of a portfolio of materials related to types of research, applications for research opportunities as well as items demonstrating understanding research as applied to clinical medicine. During this course, students will identify a mentor with whom they will work on their hypothesis-driven research activity during the MSRE course. Types of research projects may include laboratory or basic research, clinical research, population-based research or community-based participatory research. In order to successfully complete this course, students must complete or update the CITI online training. **(1 credit hour)**

**ASM.D. 335 – Principles and Practice of Medicine (PPM) – IA** - This course, offered in the fall of the freshman year, concentrates on appreciation of the patient-physician encounter (styles of communication, cultural competency, patient confidentiality); development of scientific reasoning and critical thinking skills including the interpretation of biostatistics and epidemiological findings, understanding of health policy and the organization of health care systems and clinical research in the United States; and an introduction to clinical ethics and end-of-life issues. A particular highlight of the course is opportunities for all students to shadow physicians in clinical settings. Approximately half of all scheduled sessions utilize a small group format. Additional interactive sessions address medicine and societal issues relating to basic science coursework occurring parallel to the PPM course. Students are required to submit journals describing their clinical experiences and to prepare a number of papers and reports demonstrating the development of their scientific reasoning skills. **(7 credit hours)** **Prerequisite:** **ASM.D. 230 - Foundations in Clinical Medicine**

**ASM.D. 340 - Principles and Practices of Medicine IB** - This course is offered during the Spring semester of the freshman year and builds on the clinical observations made by the students during their earlier clinical shadowing experiences. Having observed physicians taking histories and performing physical examinations, the students now begin to develop their own skills in these two key areas. Peer partners, standardized patients and videotaping sessions are used to help the students perfect their interviewing and examination skills. The physical examination skills learned during this semester will parallel the Integrated Neuroscience curriculum being offered simultaneously. Additionally, interactive sessions addressing medicine and societal issues relating to basic science coursework will continue to be offered in the spring as in the fall. **(5 credit hours)** **ASM.D. 335 – Principles and Practice of Medicine (PPM) – IA**

**ASM.D. 402 - Comprehensive Medical Review Program (CMRP)** - The Comprehensive Medical Review Program (CMRP) is an extended review of the basic sciences to prepare students to take the USMLE Step 1 examination. After administration of a comprehensive pre-assessment examination, students receive access to daily quizzes via an electronic question bank that simulates USMLE Step 1 questions. This battery of discipline-specific comprehensive examinations and practice tests is used to create measured outcomes that profile each participant's performance. Individual counseling, using performance profiles, is conducted and students receive feedback and direction for self-study. These performance profiles are also used by skills specialists to help students with the mechanics of taking standardized tests. This customized approach assures that students have adequate time to address cognitive weaknesses, while providing a mechanism to measure proficiency in each area. **(2 credit hours)**

**ASM.D. 415 and 416 – Principles and Practice of Medicine IIA and IIB.** This course is presented in an interdisciplinary format correlated with the organ system presentations of each of the second-year disciplines. The purpose of this course is to assist students in integrating the basic and clinical sciences and to provide a framework for students to learn the interviewing and physical examination skills necessary for competent patient care. This two-semester course also serves as an introduction to the concepts involved in clinical problem solving and consists of

physical diagnosis, case-based teaching and clinical correlations. **(415 – 7 credit hours) (416 – 7 credit hours)** **Prerequisites:** ASM.D. 335 and 340 - Principles and Practice of Medicine - IA and IB

**ASM.D. 443 – Medical Student Research Experience (MSRE)** – Through this course each student undertakes a mentored and evaluated individualized hypothesis-driven research project for a minimum of eight weeks. Projects may be selected based on the student's own preference and may range from basic science laboratory (“bench science”) clinical research, population-based research or community-based participatory research. Students will be supervised directly by an experienced research investigator, at any institution, pending approval. Students will present a description of their activities in a structured abstract along with a poster presentation. Prerequisite: ASMD 311 Principles and Practices of Research; and completion of the CITI online training. **(1 credit hour)**

## **Division of Integrated Didactics**

**ANAT 320 - Gross Anatomy and Embryology** – Gross anatomy and embryology is offered in the fall semester of the first year of the curriculum and is a course that teaches the gross structure and developmental sequences of the human body. Students working in small groups dissect a human cadaver. Didactic and clinically oriented lectures are supplemented by prosections and radiological presentations. Clinical correlations are made through periodic demonstrations and/or didactic lectures by clinicians. **(11 credit hours)**

**BICH 320 - Molecular Cell Biology & Genetics (MCBG I)** – This course covers fundamental cellular, biochemical, genetic and molecular concepts that are foundational to the practice of medicine. **MCBG I** is offered during the fall semester to freshman medical students and covers eukaryotic cell structure and function, cell cycle progression and regulation, and macromolecular synthesis including protein, RNA and DNA. Other aspects of DNA metabolism including DNA mutations and repair are also covered. Important mechanisms that mediate gene expression and regulation, including hormone-mediated signal transduction, secondary messengers, transcriptional regulation, and post-translation modifications are also taught. Basic biochemical concepts and principles in carbohydrate, protein, and lipid structure and function, enzyme kinetics, inhibition, and regulation of activity, are presented during the summer to serve as a good foundation for intermediary metabolism, which forms a major portion of the course. Topics presented in intermediary metabolism, include in-depth analysis and regulation of carbohydrate, lipid, amino acid, heme, purine, and pyrimidine biosynthesis and degradation. Students are also introduced to biochemical and modern molecular biology techniques including polymerase chain reaction (PCR), Western, Northern, Southern and Western blot analyses, and their applications in the molecular diagnosis of diseases. When necessary, clinical correlations are cited and explained in most of the topics taught in the course **(9 credit hours)**.

**ASM.D. 330 - Principles of Immunology and Host Defense** - This course is offered in the Spring semester of the first year of the curriculum. The goal of this course is to help students achieve an integrated and correlated understanding of the immune system and its role in host response and human disease. The course encompasses a presentation of the basic immune response and the principal mechanisms involved in disease with an in-depth presentation of the pathology associated with immunologic diseases. The course has two components. The basic immunology component focuses on the processes in the innate humoral and cellular immune systems and the lymphoid tissues involved in those responses. The clinical immunology component focuses on how the immune system is involved in many areas of clinical medicine including allergy and hypersensitivity, tumor resistance, transplantation, autoimmune diseases, primary and secondary immunodeficiencies, blood transfusions, infectious diseases and immune modulation. The information is presented in a combination of didactic lectures, laboratory exercises, small-group sessions, patient-oriented problem solving exercises, on-line clinical case evaluations and clinical correlations. **(4 credit hours)** **BICH 320 - Molecular Cell Biology & Genetics (MCBG I)**

**ASM.D. 345 - Foundations in Human Disease and Treatment** - This course is offered to freshman medical students during the Spring semester and includes modules in neuroscience pathology and pharmacology. The goal of this course is to provide students with a foundation for understanding the cellular basis of the physiologic and biologic manifestations of disease. A focus on fundamental principles related to disease mechanisms and treatment sets the stage for coverage of specific disease processes presented in the organ system modules. Moreover, the neuroscience component of the course provides students with the fundamental principles of excitable cells, synapses, as well as the structure, function and contractile properties of muscle. **(3 credit hours)** **Prerequisite:** **BICH 320 - Molecular Cell Biology and Genetics I**

**ASM.D. 350 - Principles of Infectious Diseases** - This course is offered in the Spring semester of the first year of the medical school curriculum. The goal of this course is to help students achieve an integrated and correlated understanding of the principles of infectious diseases involving bacterial, fungal, parasitic and viral pathogens including current knowledge regarding the epidemiology, virulence mechanisms, clinical symptoms and pathology, diagnosis, treatment and prevention of specific infectious agents. This course is divided into three sections: (1) microbial structure, function, physiology, genetics and molecular biology; (2) bacterial and fungal pathogens; and (3) parasitic and viral agents of human disease. The approach is to present the pathogens as a survey of infectious agents but within the context of the major organ systems/tissues affected. This approach should facilitate the student's study in the organ-based courses. Information in the course is presented in a combination of didactic lectures, laboratories, small-group sessions, patient-oriented problem solving exercises and clinical correlations. **Prerequisite:** **(5 credit hours) BICH 320 - Molecular Cell Biology and Genetics I; ASM.D. 330 - Principles of Immunology and Host Defense**

**PHYS 320 - Integrated Neuroscience** - The Integrated Neuroscience course will help students achieve an integrated and correlated understanding of nervous system structure, function, dysfunction and therapeutics. The course will be taught in the following blocks: (1) anatomy of the nervous system, meninges and vasculature; (2) sensory systems; (3) motor system; and (4) higher function. Each block will be composed of instruction in biochemistry, neurology, pathology, anatomy and cell biology, pharmacology, physiology, psychiatry and behavioral sciences. **(9 credit hours)** **Pre-requisite:** **ASM.D. 345, Foundations in Human Disease and Treatment**

**ASM.D. 430 - Hematopoietic and Lymphoreticular Systems**- This course is offered to sophomore medical students during the Fall semester and builds on the knowledge obtained from the freshman year in understanding the normal immune system, structures and response to infectious diseases of the hematopoietic and lymphoreticular systems. This course is designed to assist students in gaining an understanding of the physiologic processes, pathologic changes, as well as the effects of both pharmacological and other clinical interventions utilized to restore tissues and the organ at the molecular, cellular and macroscopic levels, to their optimal functional conditions. In addition, upon completion of this module students will gain an understanding of the associated behavioral changes in normal and disease states as it affects the hematopoietic and lymphoreticular systems and the body as a whole. The course presents detailed microscopic and macroscopic structures of the hematopoietic and lymphoreticular systems in health, disease, and the result of pharmacological and other clinical interventions. **(3 credit hours)** **Prerequisites:** **ANAT 320, ASM.D. 230, 330, 340, 345, 350, BICH 320, 330, PHYS 320**

**ASM.D. 435 – Musculoskeletal, Skin & Related Connective Tissues** - This course is offered in the Fall semester of the second year and builds on the knowledge obtained from the freshman year in understanding the normal musculoskeletal, skin and related structures in health and in disease states. This course will assist students in understanding the physiological processes, the pathological changes and effects of both pharmacological and other clinical interventions to restore tissues and the organ at the molecular, cellular and macroscopic levels to their optimum functional conditions. In addition, students will gain an understanding of the associated

behavioral changes in normal and disease states as it affects musculoskeletal, skin and related connective tissues, as well as the body as a whole. The course presents detailed microscopic and macroscopic structures of the musculoskeletal, skin and related connective tissue in health, disease, and the result of pharmacological and other clinical interventions as they relate to musculoskeletal, skin and related connective tissues. **(3 credit hours)** **Prerequisites:** **ANAT 320, ASM.D. 230, 330, 340, 345, 350, BICH 320, 330, PHYS 320**

**ASM.D. 440 - Cardiovascular System** - This course is offered to sophomore medical students during the Fall semester and begins to explore how alterations in structure (anatomy) and function (physiology) of the cardiovascular system disrupt the functions of the human body. It provides the foundation by which students begin to understand the cellular basis for the physiologic and biologic manifestations of diseases of the cardiovascular system and the adaptations that the body makes to the changes produced by disease processes. Integral in this course is the understanding of how the basic anatomy and physiology of the cardiovascular system relates to the adaptation and the pathogenesis of cardiovascular diseases. Topics related to blood vessels, pericardium, myocardium and endocardium serve as the basis for the course. A variety of instructional modalities including laboratory exercises, small group discussions, team learning exercises and individual assignments using clinical cases and problem sets are utilized to emphasize and integrate conceptual information. **(4 credit hours)** **Prerequisites:** **ANAT 320, ASM.D. 230, 330, 340, 345, 350, BICH 320, 330, PHYS 320**

**ASM.D. 445 - Pulmonary System** - This course is offered to sophomore medical students during the Fall semester and is designed to assist students in building on the foundation of knowledge of the structure and function of organs and tissues of the human body learned during the freshman year. This course will focus on detailed microscopic and macroscopic structures of the pulmonary system in health, disease, and as a result of pharmacological and other clinical interventions. Comprehensive and coherent didactic information presented in lecture format, small group discussions, case presentations and self-directed learning assignments on the pulmonary system will be utilized to emphasize and integrate conceptual information. **(4 credit hours)** **Prerequisites:** **ANAT 320, ASM.D. 230, 330, 340, 345, 350, BICH 320, 330, PHYS 320**

**ASM.D. 450 - Gastrointestinal and Hepatobiliary Function** - *This course is offered in the Fall semester of the second year and examines the physiology, pathology and pharmacological treatment of gastrointestinal and hepatobiliary function. Clinical presentations and small group discussions of patient-based cases assist the student in the correlation of basic and clinical information. The goal of this course is to assist students in understanding the structure and function of the gastrointestinal and hepatobiliary systems in health and disease. The course covers normal and abnormal processes of the gastrointestinal system, the principles of therapeutics in the gastrointestinal system, and the gender, ethnic, and behavioral considerations affecting disease treatment and prevention, including psychosocial, cultural, occupational, and environmental factors.* **(4 credit hours)** **Prerequisites:** **ANAT 320, ASM.D. 230, 330, 340, 345, 350, BICH 320, 330, PHYS 320**

**ASM.D. 455 – The Endocrine System** - This course is offered to sophomore medical students during the Spring semester and examines the physiology, microanatomy, pathology, microbiology, and pharmacology of endocrine function and dysfunction. Clinical team learning presentations and small group discussions of patient-based cases assist the students in correlating basic and clinical information. The goal of this course is to assist students in understanding the structure and function of the various components of the endocrine system in health and disease. The course covers the normal and abnormal processes associated with the endocrine system, the principles of therapeutics associated with endocrine function and dysfunction and the gender, ethnic, and behavioral considerations affecting disease treatment and prevention, including psychosocial, cultural, occupational, and environmental factors associated with endocrine function and dysfunction. **(5 credit hours)** **Prerequisites:** **ANAT 320, ASM.D. 230, 330, 340, 345, 350, BICH 320, 330, PHYS 320**

**ASM.D. 460 – The Reproductive System** - This course is offered in the Spring semester of the second year and examines the physiology, microanatomy, pathology, microbiology, and pharmacology of reproductive function and dysfunction. Clinical team learning presentations and small group discussions of patient-based cases assist students in correlating basic and clinical information. The goal of this course is to assist students in understanding the structure and function of the various components of the reproductive system in health and disease. The course covers normal and abnormal processes in relationship to reproductive function, the principles of therapeutics associated with reproductive function and dysfunction, as well as gender, ethnic, and behavioral considerations affecting disease treatment and prevention, including psychosocial, cultural, occupational, and environmental factors associated with reproductive function and dysfunction (e.g., STDs). **(4 credit hours)** **Prerequisites:** ANAT 320, ASM.D. 230, 335, 340, 345, 350, BICH 320, 330, PHYS 320

**ASM.D. 465 - Growth, Development and Aging** - This course is offered during the spring semester of the sophomore year. The goal is to integrate biological, social and psychological aspects of progression through the lifespan with particular emphasis on pediatric and geriatric populations. The course utilizes multiple formats including lectures, panels, small group activities, and semi-structured interviews in community settings. The ethics component focuses on particular issues related to pediatric and geriatric populations, as well as loss, grief, death and dying. **(3 credit hours)** **Prerequisites:** ANAT 320, ASM.D. 230, 320, 330, 340, 345, 350, BICH 320, 330, PHYS 320

**ASM.D. 470 - Renal/Urinary System** – This course is offered in the Fall semester of the second year and is designed to assist students in understanding the physiological processes, pathological changes and the effects of both pharmacological and other clinical interventions to restore tissues and organs at the molecular, cellular and macroscopic levels, to their optimum functional conditions. The course will allow students to build on knowledge obtained from the freshman year in understanding the normal immune system, its structures and response to infectious diseases of the renal/urinary system. Behavioral changes in normal and disease states as it affects the renal/urinary system and the body as a whole are an integral component of this course. **(4 credit hours)** **Prerequisites:** ANAT 320, ASM.D. 230, 320, 330, 340, 345, 350, BICH 320, 330, PHYS 320

**ASM.D. 480 – Psychiatry/Behavioral Sciences** - This course is taken in the Spring semester of the sophomore year and is designed to enhance students' understanding of the bio-psychosocial correlates of illnesses and to assist them in implementing intervention strategies directed toward improved outcomes in holistic patient management. Case studies and case presentations are introduced for the purpose of clinical correlations and problem-solving approaches. Specific topics covered in this course include adult transitions, adjustment disorders, human sexuality, the study of symptoms differentiation and classification, psychoactive substance use disorders, factitious disorders and malingering. Ethical issues related to the patient's care and forensic psychiatry is also given coverage. **(3 credit hours)** **Prerequisites:** ANAT 320, ASM.D. 330, 320, 330, 340, 345, 350, BICH 320, 330, PHYS 320

**ASM.D.50101, ASM.D.50201, ASM.D.50301, ASM.D.50401 – Intersessions I – IV** - The Intersession courses are offered between clinical rotations during various times throughout the third year. Students revisit basic science concepts, including topics such as: normal and adapted cell, cell injury and cell death, inflammation and repair, pharmacokinetics/pharmacodynamics, genetic testing, principles of neoplasia, breast cancer, prostate cancer, gastrointestinal diseases, gynecologic oncology, lymphatic and hematopoietic diseases chemotherapy, diagnostic imaging, diseases of immunity, hemodynamic, infectious disease, and environmental and nutritional diseases. In addition, other hot and emerging topics discussed include, medical ethics, bioterrorism, medical errors and physician stress management. **(2 credit hours each)**

**ASM.D.636 – Capstone** - The Clinical Management (Capstone) course is a required four-week module in the fourth year. This multidisciplinary course includes lectures and discussions of: preparation for the residency experience: ACGME rules, USMLE Step 3, fellowships, GME rules and regulations, policies on probation and termination, managing stress and balancing career and family; role of interns in patient care: rounds, pre-rounds, sign-out notes, discharge planning, avoiding prescription and other medical errors; fiscal management: financial planning, buying versus renting a home, investment strategies, managing debt and billing for services; legal medicine; ethics, clinical equipoise and patient advocacy; death and dying, palliative care, pain management, hospice, delivering bad news; clinical research and research during residency; evidence-based medicine, how to read a paper, biostatistics; and miscellaneous special topics – cancer, geriatrics, global medicine and the future of health care reform. **(9 credit hours)**

## **ELECTIVE COURSES**

**ASM.D. 605 - Computers in Clinical Medicine** - This elective is a four-week course for third- and fourth-year medical students. It provides instruction on the use of computers and the Internet in the study and practice of medicine. During this rotation, students are introduced to various Internet sites of medical significance. Students are initially shown how to use the content of Internet sites and then given assignments on various medical and laboratory disorders using the Internet as their only resource. Upon completion of this course, students will possess the knowledge, computer skills and attitudes necessary to utilize the computer as a tool for the lifelong study and practice of medicine. **(9 credit hours)**

**ASM.D. 636 - Clinical Management Elective** - Students who participate in this four-week elective gain experience as a medical educator. This elective assists the senior student in developing teaching skills in the clinical and basic science setting. Principles of adult learning theory, effective teaching techniques and evaluation of clinical performance, including effective methods of giving feedback to trainees, are presented and emphasis is placed on how to efficiently track physical diagnosis/clinical skills performance. Each participant in the elective puts theory into practice by serving as an instructor for freshman and/or sophomore students in physical diagnosis and clinical interviewing. Participants also serve as evaluators of student performance during standardized patient examinations. By serving as teachers and evaluators, students enhance their own clinical skills. **(9 credit hours)**

**ANAT 602 – Gross Anatomy Elective**- Specialized sessions arranged for advanced study or research in specific anatomical areas utilizing small group activities, which facilitate teacher-student interaction. **(9 credit hours)**

**BICH 601 – Biochemistry Research** – This rotation may be four to eight weeks in duration depending on the research project selected and is open to junior and senior medical students. During the course of this elective, each student will receive appropriate training in the basic skills needed to conduct research including the development of hypotheses, experimental design and data analysis. **(9 credit hours)**

**BICH 651 – Nutrition Research** – This four-week course is open to third and fourth year medical students, interested in the various aspects of nutrition research. Students will receive training in the basic skills needed to conduct projects including the development of hypotheses, experimental design and data analysis. **(9 credit hours)**

**PHAR 602 – Pharmacology Research** - This four-week course is open to third and fourth year medical students, interested in the various aspects of research in pharmacology. Activities in this program include research for medical students on drug action at the cellular and molecular levels; factors affecting variation in drug response; and interaction between different diseases, such as hypertension, sickle cell disease, kidney and liver disorders. **(9 credit hours)**

**PHYS 602 – Research in Physiology** - This rotation may be four to eight weeks in duration depending on the research project selected and is open to junior and senior medical students. During the course of this elective, student will receive appropriate training in the basic skills needed to conduct research including: the development of hypotheses, experimental design and data analysis in their area of interest. (9 credit hours)

## CLINICAL COURSE DESCRIPTIONS

### DEPARTMENT OF FAMILY AND COMMUNITY MEDICINE

#### Objectives

The department's goal is to educate and train physicians in the clinical specialty of family medicine and to encourage all physicians to provide high quality, continuous, comprehensive primary care. The Department provides training with family physicians teaching the basic clinical and academic skills necessary to provide continuing, comprehensive health care unrestricted by age, gender, organ system and location of service.

#### COURSE DESCRIPTIONS

**FAM.D. 502 - Family Medicine Clerkship** - A one-on-one preceptor experience at one of the many approved office practices and health centers located in Tennessee. This clerkship focuses on ambulatory services in a comprehensive, continuing health care program, preferably utilizing a family health care team. Students are under the supervision of a physician preceptor as part of a family health care team. They are expected to share in decision-making and in planning for patients, their families and communities. (9 credit hours)

**FAM.D. 603 - Senior Family Medicine Clerkship:** This rotation is a four-week, community-based clinical experience designed to expose senior medical students to community-based experiences in underserved communities across the state of Tennessee with a focus on the primary care specialties. This clinical experience occurs under the tutelage of primary care physicians who have well rounded clinical practices. In addition to theoretical and clinical community-based exposure, this rotation is designed to positively influence medical students to consider locating their own clinical practice in a rural or urban underserved area (9 credit hours)

**Prerequisite FAM.D. 502 – Family Medicine Clerkship**

#### ELECTIVE COURSES

**FAM.D. 604 - Family Medicine Senior Elective** – This elective experience fully utilizes the abundance of ambulatory family and community health care settings available throughout Tennessee. The objective is to progressively and systematically build upon the skills and knowledge previously gained during the first and second years and the clinical clerkship in Family Medicine. Preventive medicine, psychology and social disciplines are structured into the family health team focus. In addition to clinical experiences, students are provided with the opportunity for community involvement so that they gain more insight into the characteristics of the community and the impact environment has on the health of the population served. Our numerous preceptors permit exposure to the broad spectrum of diverse health care practice models that exist in rural and urban areas, in an effort to inculcate an adequate operational concept of health and illness management. (9 credit hours)

**Family Medicine Research Elective:** This elective is designed to introduce students to clinical research opportunities in Family Medicine. The Department has many ongoing clinical research opportunities requiring the participation of a multidisciplinary team. The student, with supervision

of the principal investigator, will participate as a member of the multidisciplinary team on design, data and outcomes of clinical research. **(9 credit hours)**

## DEPARTMENT OF INTERNAL MEDICINE

**MEDI 501 – Internal Medicine Clerkship –** This is a 12-week core clerkship during which third-year medical students spend four weeks at various clinical sites affiliated with the Department of Internal Medicine. The students spend four weeks on each of the following services: general internal medicine service of the Nashville General Hospital, in-patient service at the Murfreesboro VA Medical Center and at one of numerous rural or urban ambulatory sites. A balanced program of clinical work is designed for students, with emphasis placed upon perfecting the techniques of history taking, physical examination, case presentation and the functional utilization and correlation of basic laboratory and clinical findings. Students participate in rounds regularly with residents and attending physicians. In these settings, the student assumes a role as an accepted and valuable member of the health team and thus plays a major role in the daily evaluation and treatment of patients. Students take night call with their team and attend weekly medical grand rounds, journal club and morbidity/mortality conferences. Daily lectures and conferences in selected subspecialty areas are given to supplement the educational program. **(27 credit hours)**

**MEDI 603 - Senior Internal Medicine -** This is a four-week clerkship for senior medical student, which may be served at either Nashville General Hospital at Meharry or the Alvin C. York VA Medical Center in Murfreesboro, Tennessee. Students are expected to take call and are taught by both medical faculty and residents of internal medicine. The purpose of this clerkship is to acquaint senior medical students with the increased level of patient care responsibility required during the first year of graduate training in internal medicine, especially those of day-to-day care and acquisition of the skills for coordinating the ancillary services each patient requires. Strong emphasis is placed on further development of bedside clinical skills, i.e., history taking, physical examination and communication skills. This course fulfills the senior internal medicine requirement. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship**

**MEDI 617 - Intensive Care Unit Clerkship -** This is a four-week clerkship for senior medical students, which may be served at either Nashville General Hospital at Meharry or at Alvin C. York VA Medical Center. The primary goal for this clerkship is to enable fourth-year medical students to participate in all aspects of the care and management of critically ill patients. Students will become familiar with detailed aspects of respiratory failure and hemodynamic compromise, as well as the integrated management of these patients. Students may be assigned call duty and will be taught by medical faculty and residents. This course fulfills the senior internal medicine requirement. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship.**

## ELECTIVE COURSES

**MEDI 620 – Cardiology Elective –** This course is designed to familiarize senior medical students with current trends in cardiac physiology and pathophysiology that are utilized in the diagnosis, treatment and management of patients with a wide range of cardiac diseases. Students are taught to integrate basic science knowledge in the clinical management and problem solving process. Seminars and small group sessions are used to teach students how to interpret electrocardiograms (EKGs) and use other diagnostic modalities to evaluate and treat patients with cardiac diseases. Students must attend the Cardiology Clinic twice weekly and participate in consult service activities. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship**

**MEDI 621 – Internal Medicine Elective –** This elective (sub-internship) is designed to prepare students to assume the responsibilities of the first year of graduate training in internal medicine, especially those of day-to-day care on the general internal medicine in-patient service. The course also provides opportunities for students to acquire the skills needed to coordinate the ancillary services each patient requires. Strong emphasis is placed on further development of

bedside clinical skills, i.e., history taking, physical examination and oral and written communication skills. Sub-interns will be responsible for a small number of patients ranging from three to six as assigned by senior residents. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship**

**MEDI 623 – Dermatology Elective** – The elective in dermatology is designed to familiarize senior students with a variety of epidermal and dermal responses, as well as the characteristics of basic dermatologic disorders, thereby becoming knowledgeable about how to make decisions concerning diagnosis and management of most common skin problems. Students may be assigned to a Nashville General Hospital clinic or to an affiliated private practice. **(9 credit hours)**

**MEDI 624 – Gastroenterology Elective** – A major goal for this elective is to teach both the clinical and academic content of gastroenterology (GI). Students may be assigned to a clinic or at a private practice office. They are expected to become familiar with the scope of gastroenterology and its application to the general care of patients. Students are expected to read assigned topics on gastroenterology and then discuss those topics with the attending physician. They must attend all GI procedures, consultative rounds, informal discussions, conferences and visit other hospitals with their attending physician. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship.**

**MEDI 625 – Nephrology** – This elective introduces students to clinical problems in nephrology. Included in this elective is the evaluation of patients with glomerular and interstitial renal failure and end-stage renal disease (ESRD). Students are expected to participate in daily rounds and must attend the weekly outpatient clinic in the hospital and at the Dialysis Clinic located on campus. They are assigned readings on topics for nephrology. All teaching conferences involving nephrology must be attended by students for this elective. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship**

**MEDI 626 - Pulmonary Diseases** - This is an introductory course to acquaint students with the important principles and practices of pulmonary medicine. It is structured to develop competency in making initial evaluations of patients with pulmonary disease; and how to use chest x-rays in evaluating pulmonary problems. In this course, students should become competent in making initial evaluations of patients with pulmonary disease. They will also become familiar with using chest x-rays as an evaluative tool for pulmonary problems and the appropriate treatment of major respiratory diseases. They must also participate in all relevant activities, including daily rounds and clinical conferences. They will also learn the basic principles for treating major respiratory diseases. Students will also learn how to manage patients with acute medical illnesses in the Intensive Care Unit ("ICU"). **(9 credit hours)** **Prerequisite: MEDI 501 - Internal Medicine Clerkship.**

**MEDI 627 - Infectious Diseases** – Senior-level students are introduced to the most common problems of infectious diseases in adolescents and adults and how to manage these problems. The environment for this course includes the emergency room, private practice and the hospital. Students are expected to perform workups on selected patients and then make presentations to the Infectious Disease faculty. They are expected to read cases and/or other assigned literature on infectious diseases and make reports on their findings. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship.**

**MEDI 628 - Hematology/Oncology** - This elective provides exposure to community hematology/oncology problems in an inpatient and outpatient setting. This course is designed to develop skills for evaluating, diagnosing and treating patients with anemia, solid tumors, common hematologic problems and other oncologic emergencies. Students are assigned various readings to develop an understanding of the natural history of the different kinds of malignancies. They are expected to learn how to interpret peripheral smears as well as bone marrow aspirations through review sessions with the attending physicians. **(9 credit hours)** **Prerequisite: MEDI 501 – Internal Medicine Clerkship.**

**MEDI 629 - Endocrinology/Metabolism** - This elective will help the student to develop an understanding of basic pathophysiology of endocrine diseases with emphasis on clinical endocrinology, including diabetes mellitus (I & II) and inpatient/outpatient management. It also acquaints the student with home glucose monitoring, insulin therapy and acute/chronic complications of the disease. Students will become familiar with thyroid disorders, pituitary disorders, calcium metabolism, electrolyte disorders and adrenal disease. This elective may be served in the clinic, the hospital or in a physician's private office or a combination of sites. **(9 credit hours)** **Prerequisite:** **MEDI 501 – Internal Medicine Clerkship**

**MEDI 630 - Medical Oncology** - During this elective, students will learn how to manage common oncology problems such as pain, infection/sepsis/opportunistic disease and emergencies associated with cancer. They will be exposed to the interdisciplinary aspect of oncology and the cooperation necessary between the chemotherapy, radiation therapist and the surgical oncologist. Students will observe and participate in treating cancer patients as it evolves through interactive discussions between patient/family and oncologist and through the use of case studies. Students are expected to attend and participate in weekly tumor boards and breast cancer seminars. Special reading assignments may be made by the attending physician. **(9 credit hours)** **Prerequisite:** **MEDI 501 – Internal Medicine Clerkship**

**MEDI 631 - Emergency Medicine** - This course is structured to develop an appreciation of the role of emergency physicians and the emergency department in a medical system and to develop clinical skills appropriate to this type of setting. It provides training in how to quickly develop good rapport with patients to elicit information needed for history-taking. This course is intended to help the student to quickly assess the situation and respond rapidly to diagnose, treat and manage the patient. Students are expected to develop broad-based general medical and surgical skills as well. **(9 credit hours)** **Prerequisite:** **MEDI 501 – Internal Medicine Clerkship or SURG 501- Surgery Clerkship.**

**MEDI 635 - General Medicine** - This elective provides an overview of what to expect for the practice of general internal medicine. Students are expected to develop an appreciation of what is required of an attending physician when caring for inpatients as a member of an intern/resident team. Students are expected to perform essentially the same duties of an intern but with half the workload. They will participate in the management of assigned patients under the supervision of a resident. The sub-intern must attend conferences and attend rounds with the team as well as take call. A faculty preceptor is assigned to the student for regular supervision. **(9 credit hours)** **Prerequisite:** **MEDI 501 – Internal Medicine Clerkship**

**MEDI 636 - Clinical Management Elective** - Students who participate in this four-week clerkship gain experience as a medical educator. The clerkship assists the senior student in developing teaching skills in the clinical and basic science setting. Principles of adult learning theory, effective teaching techniques and evaluation of clinical performance, including effective methods of giving feedback to trainees, are presented. There is emphasis on how to efficiently track physical diagnosis and clinical skills. The participant in the elective puts theory into practice by serving as an instructor for freshman and/or sophomore students in physical diagnosis and clinical interviewing. Participants also serve as evaluators of student performance during standardized patient examinations. By serving as teachers and evaluators, students enhance their own clinical skills. **(9 credit hours)** **Prerequisites:** **MEDI 501, SURG –501, PEDI – 501 and OBGY – 501 Clerkships. RADI - 601 is highly recommended but not required**

**MEDI 638 - Physical Medicine and Rehabilitation** - Students who elect to take this course will work with York VA Medical Center in Murfreesboro, TN. They will become familiar with the physical consultation services, including trauma (brain injury, spinal cord injury and multiple fractures), neurology, orthopedics and other diagnostic categories. They will have the opportunity to observe physical and occupational therapists, speech pathologists and audiologists individually or in a team approach regarding patient care. Students will also learn how to perform a functional

examination and participate on the consult, outpatient clinic and electromyogram (EMG) services. **(9 credit hours)** **Prerequisites:** **MEDI 501- Internal Medicine and SURG –501 – Surgery Clerkships**

**MEDI 640 – Geriatrics** - This course provides the student with the didactic and clinical care experiences associated with the aging patient. It focuses on the interdisciplinary approach for assessment and management of elderly patients from those who are still active, functional and ambulatory, as well as those who are considered frail. Students are introduced to settings that include multiple components of the healthcare continuum such as ambulatory clinics, day hospitals, acute inpatient hospitalization, long-term care facilities and rehabilitation. Students work with health professionals from a variety of disciplines to develop skills in evaluating and treating medical problems unique to the elderly. **(9 credit hours)** **Prerequisites:** **MEDI 501- Internal Medicine**

**MEDI 643 - Medical Research** - This elective in clinical research guides the student in activities, which may ultimately produce a manuscript that is suitable for submission to a peer review journal. Students participate in chart and/or literature reviews and assist in designing and conducting clinical research studies. If the manuscript is suitable, it may be submitted in abstract form to a scientific meeting for possible presentation. This elective may take longer than the normal 4-week period based on the project selected, and is prearranged between a clinical researcher in the Department of Internal Medicine and the student. **(9 credit hours)**

## Division of Neurology

### COURSE DESCRIPTIONS

**PSYC 601 – Psychiatry/Neurology Clerkship** - This required senior clerkship is a shared four-week rotation with the Department of Psychiatry and Behavioral Sciences allowing the student neurology and psychiatry clinical experiences throughout the Nashville community. The goal of the neurology component is to teach the principles and skills underlying the recognition and management of the neurological diseases a general medical practitioner is most likely to encounter in practice. Additional neurology exposure will occur on the consultative neurology service and diagnostic testing at Nashville General Hospital and surrounding hospitals in the Nashville/Murfreesboro region. **(9 credit hours)** **Prerequisites:** **MEDI 501- Internal Medicine; PSYC 501 - Psychiatry Clerkship**

### ELECTIVE COURSE

**MEDI – 622 – Neurology Elective** - The general neurology rotation gives the student an opportunity to experience the full breadth of general neurology not seen during the Internal Medicine core clerkship. Student will participate on the inpatient neurology consultation service and in neurology clinics at Nashville General Hospital. In addition, students will participate in neurophysiologic diagnostic services (EEG and EMG) and will attend the Memory Disorders Clinic. Specialized instruction will be provided for epilepsy, stroke, migraine treatment and peripheral nerve disorders. This course cannot be substituted for PSYC 601. **(9 credit hours)**

## DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

### COURSE DESCRIPTION

**OB/GYN 501 - Obstetrics and Gynecology Clerkship** - This course is designed to help medical students become familiar with many of the usual and unusual gynecological and obstetrical problems that will confront them, especially during their postgraduate training periods and to encourage them to cultivate the initiative and sober judgment necessary in the mastery of these

problems. To achieve this objective, students are assigned to smaller groups, which rotate alternately on the obstetrical or gynecological service while gaining specific exposure to various aspects of the field. Students are required to attend weekly grand rounds, daily bedside rounds, weekly clinical pathology conferences and perinatal mortality conferences. Emphasis is placed on history-taking, physical examination, case presentation, diagnosis, clinical management, testing and laboratory. Audiovisuals, student-controlled seminars, lectures and clinical demonstrations are used liberally. **(18 credit hours)**

## **ELECTIVE COURSES**

**OBGY 602 - Obstetrics and Gynecology Electives** - Four-week elective courses in obstetrics and gynecology are offered each rotation during the academic year. The course is open to students in the fourth year. The primary objective of the elective is to stimulate interested students, at an early stage of their career, in the field of obstetrics and gynecology. Each student is responsible for reviewing the anatomy and physiology of the female reproductive system. The senior student choosing an elective in OB/GYN is expected to gain advanced experience closely akin to an internship (sub-internship). External electives require approval by the departmental chairperson or clerkship director. **(9 credit hours)** **Prerequisite: OB/GYN 501 - Obstetrics and Gynecology Clerkship**

**OBGY 603 - Reproductive Endocrinology and Infertility Elective** - Over a four week period, students engaged in this elective will be expected to gain a thorough fundamental knowledge of reproductive endocrinology, infertility and related topics as outlined in the Education Objectives of the Association of Professors of Gynecology and Obstetrics (APGO). These objectives include an understanding of normal and abnormal puberty, amenorrhea, hirsutism and virilization, normal and abnormal uterine bleeding, dysmenorrhea, climacteric, infertility and premenstrual syndrome. **(9 credit hours)** **Prerequisite: OB/GYN 501 - Obstetrics and Gynecology Clerkship**

**OBGY 604 – Research Elective** – This is an eight to 12 week elective, depending on the area of interest and allows the student to implement a research project with a faculty member from the Department of OB/GYN. Students will be trained in the basic skills necessary to do research, including observation, development of hypotheses, experimental design, statistical analysis, interpretation of results, drawing of conclusions and writing of a research report. The student is required to present data at student research day or a national meeting. **(9 credit hours)**

**OBGY 605 - Maternal and Fetal Medicine** - This four-week maternal and fetal medicine (MFM) elective will consist of the following: office ultrasound, dating and fetal anatomy survey, exposure to fetal malformations, biophysical profile, prenatal care, amniocentesis, perinatal consultation, genetic consultation and periconceptual counseling. Students will participate in night calls and obstetrical procedures, including episiotomy, instrumental delivery, caesarean sections and cerclage procedures. Students will learn when to refer high-risk obstetrical patients to MFM, to perform obstetrical pelvic exams and to offer prenatal care. Additionally, students will analyze and interpret fetal surveillance, such as monitoring ante partum and intrapartum. Students will participate in all didactic sessions for obstetrics, as well as participate in high risk obstetrical conferences, perinatal/neonatal conferences, weekly case presentations and other departmental continuing medical education programs related to obstetrics. Students will choose a clinical topic for research, conduct a literature review and submit a paper suitable for publication. **(9 credit hours)** **Prerequisite: OB/GYN 501 - Obstetrics and Gynecology Clerkship**

## **DEPARTMENT OF PATHOLOGY, ANATOMY AND CELL BIOLOGY**

### **Objectives**

The department's objective is to imbue students with the desire to maintain a state-of-the-art proficiency in pathology, professional responsibility, and a life-long commitment to the expanding

reservoir of scientific ideas. Objectives are designed to further enhance the collective ability to deliver superior undergraduate and graduate medical education, and to effectuate the best possible patient care and other service-related responsibilities.

## **Elective Courses**

Electives are designed and offered with the aim of broadening the pathobiological and pathophysiological knowledge sphere of both undergraduate and postgraduate students in the health sciences. Courses are offered by prearrangement, with full participation of all members of the faculty.

## **COURSE DESCRIPTIONS**

**ASM.D. 475 - Great Syndromes** - This course is taken in the Spring semester of the sophomore year after students have been exposed to all organ systems. The student learns the complex dimensions of clinical judgment, including: complexities of interactions, involvement of multiple organ systems, examples of major syndromes and diseases, life stages, patient's perspective, and incorporation of basic science knowledge. Predicated on students' knowledge of the basic science organ systems, this course acquaints students with the complexities and integrative dimensions of clinical judgment. Via clinical cases involving selected syndromes, this course will explore content topics including aging, critical thinking, ethics, professionalism, treatment principles and situational awareness. **(2 Credit hours)** **Prerequisites:** **ANAT 320, ASM.D. 230, 330, 340, 345, 350, BICH 320, 330, PHYS 320**

**PATH 602 - Surgical Pathology Elective** - This course is specifically designed for third- and fourth-year medical students and focuses on introducing students to a hands-on approach to histopathology. Students participate in the daily review of gross specimens and in the diagnostic process of microscopic descriptions and pathologic diagnoses. **(9 credit hours)**

**PATH 902 - Forensic Pathology Elective** - This course is specifically designed for fourth-year medical students with an expressed interest in pursuing a career in one of the disciplines of pathology. Its major focus is to introduce students to the investigative approaches of unexplained and unnatural deaths. Prior participation in PATH 602 (Surgical Pathology Elective) is highly recommended but not required. Students rotate through the Forensic Sciences Center on Ben Allen Road, Madison, Tennessee. **(9 credit hours)**

## **DEPARTMENT OF PEDIATRICS**

### **Objectives**

The general objective of the Department of Pediatrics is to equip students with a broad insight into the principles and problems of pediatrics. The aim is also to imbue students with a propensity and readiness for the application of basic science principles in the analysis and study of the clinical problems of pediatric patients.

## **COURSE DESCRIPTIONS**

**PEDI 501 - Pediatric Clerkship** - During a period of eight weeks, students are assigned to clinical duties in the inpatient and outpatient settings. Students obtain patients on rotation as they are admitted to the Nashville General Hospital or Vanderbilt Children's Hospital. They also see patients in the Meharry Pediatric Clinic, Matthew Walker Comprehensive Health Center and private office settings. Students have the opportunity to perform Clinical Laboratory Improvement Amendments (CLIA) wavered laboratory tests in the work-up of their cases. To ensure greater depth and more insight into the clinical problems presented by their cases, students are required to engage in certain unique supplementary diagnosis and therapeutic exercises in completing the

study of the problems that the patient presents. Apart from formal lectures by the faculty on common pediatric problems, small group conferences, preferably at the bedside, are held and at that time the student's work and understanding of the patient's disease processes are discussed and evaluated. Demonstrations of the techniques of examining infants and children are given and supervised practice opportunities are provided so that each student achieves some degree of proficiency. In addition, students are given computerized cases to complete weekly. A simulated skills lab is available and allows for procedural techniques to be perfected. Attendance is required at ward rounds, ambulatory clinics and the weekly pediatric grand rounds, pediatric x-ray conference, case (morbidity and mortality) conferences and Clinical Pathology Conference (CPC). **(18 credit hours)**

### **ELECTIVE COURSES**

Electives in pediatrics are available to fourth year medical students. These electives can be tailor-made to suit students desiring to increase expertise in ambulatory, primary care, endocrine, newborn intensive care unit (NICU) or research. The student is expected to participate in all didactic lectures and conferences as available.

**PEDI 601 –Ambulatory Pediatric Elective** is a four week elective with a primary focus for the student to gain advance fundamental clinical knowledge and skills to increase diagnostic and managerial acumen in children from birth through adolescents; to further the knowledge of students concerning community resources and their integration in the management of the patient holistically. **Prerequisite: Pediatrics 501 preferably (9 credits hours)**

**PEDI 602 – Ambulatory Adolescent/Health Department-** is a four week elective offering the opportunity to advance expertise in gynecological skills in the adolescent age group. The elective is spent in Meharry adolescent clinic and Health Department Sexually Transmitted Infection clinic. This elective focuses on increasing skills in sexual history taking and physical exam skills, as well as improving diagnostic acumen and management of adolescents with GYN issues and STI.

**Prerequisite: Pediatrics 501 (9 credit hours)**

## **DEPARTMENT OF PSYCHIATRY AND BEHAVIORAL SCIENCES**

### **Objectives**

The teaching of clinical psychiatry has two major goals: 1) imparting knowledge about psychiatric conditions and 2) cultivating sensitivity to the patient as an individual whose unique attitude toward self and the physician often play an important part in the physician's ability to diagnose and treat the patient. This sensitivity characterizes the good physician in every specialty of medicine.

### **COURSE DESCRIPTIONS**

**PSYC 501 - Psychiatry Clerkship** – The junior clerkship period is four weeks during which students spend ten weekdays at one of several different inpatient psychiatric facilities learning about acute psychiatric patients and their management. The facilities include the VA Medical Center - Murfreesboro, Middle Tennessee Mental Health Institute, Tennessee Christian Medical Center and Parthenon Pavilion. **(9 credit hours)**

**PSYC 601 - Psychiatry Clerkship** - This senior clerkship period is a shared four-week rotation with the Department of Neurology allowing the student two weeks of outpatient psychiatry and neurology clinic experiences throughout the Nashville community. Didactic classroom activities are held in the Elam Mental Health Center. The facilities include the VA Medical Center -

Murfreesboro, Middle Tennessee Mental Health Institute, Tennessee Christian Medical Center and Parthenon Pavilion. **Prerequisite: PSYC 501 - Psychiatry Clerkship (9 credit hours)**

## **ELECTIVE COURSES**

**PSYC 602 - Forensic Psychiatry** - The forensics unit at Middle Tennessee Mental Health Institute incarcerates individuals who have been convicted of murder and have chronic psychiatric diseases. A second unit is an observation unit for individuals who have murder charges pending and the court system has ordered observation for the individual suspected of having a psychiatric illness. Activities include new patient assessment, follow-up and active participation in team meetings. Students may assist preceptors in the preparation of expert testimony in criminal cases. **(9 credit hours)** **Prerequisite: PSYC 501 - Psychiatry Clerkship**

**PSYC 603 – Addiction** - Students will be exposed to a wide variety of clientele to receive detoxification treatment for various substances as well as suffering from a variety of mental illnesses. The center offers inpatient and outpatient adult drug and alcohol detoxification programs, including the Rainbow Unit (a residential detoxification program for addicted and pregnant women and their new babies). Students actively participate in treatment team meetings, group therapy, new patient assessments and work with physicians in several ongoing substance abuse research assessment projects in data collection and analysis. **(9 credit hours)**  
**Prerequisite: PSYC 501 - Psychiatry Clerkship**

**PSYC 604 – Psychiatry Research** – This is a four- to twelve-week elective depending on the project selected. Students will have opportunities to assist in research in the following areas: psychometrics, college-age binge drinking, substance abuse, psychopharmacology and the elderly, forensic psychiatry and forms of abuse leading to subsequent mood disorders. **(9 credit hours)**

**PSYC 901 - Visiting Psychiatry** - All visiting Psychiatry electives must receive prior approval by the Chairman. Interested students must provide an information sheet describing the elective from the outside institution along with contact person information. This course cannot be used in place of the required Senior Psychiatry (PSYC 601). **(9 credit hours)**

## **DEPARTMENT OF RADIOLOGY**

### **Objectives**

The objective of the Department of Radiology is to provide a basic understanding of imaging methods used to diagnose and treat disease. Radiographs of normal and pathological findings of the chest, gastrointestinal tract, bone, genitourinary, vascular and the neurological systems are discussed. Integration of imaging studies with knowledge of the basic and clinical sciences is stressed in evaluating diagnostic radiographic examinations. Also included are formal lectures covering radiation therapy, radiation biology, interventional radiology, nuclear medicine, ultrasonography, computed tomography, magnetic resonance imaging and current radiation safety during the rotation. In addition, the risks and cost benefits of the various imaging techniques are reviewed and analyzed in light of health care reform and cost containment.

## **COURSE DESCRIPTIONS**

**RADI 601 - Senior Radiology Clerkship** - This is a four-week required clerkship that is offered four times a year. The format includes lectures and presentations that are held in the Learning Resources Center four hours each morning. An organ system approach is utilized and incorporates all imaging modalities. Students are also encouraged to attend interdisciplinary conferences that are held jointly with other clinical departments. Emphasis is given to the evaluation of the various imaging modalities and the formulation of a differential diagnosis by the

clinic delivering primary or specialty care to the patient. The emphasis of the course is the development of a series of basic concepts on how to use imaging studies for the improvement of patient care, particularly in the managed care environment. Opportunities are also given to publish cases in current radiology journals. **(9 credit hours)** **Prerequisite:** **MEDI 501- Internal Medicine**

#### **ELECTIVE COURSE**

**RADI 602 - Radiology Elective** - Electives in radiology are offered to students in their senior year. The students are introduced to the various subspecialty areas of radiology, including diagnostic, ultrasound, CT, MRI and nuclear medicine in actual clinical settings. The opportunity to evaluate imaging studies as they are being performed and interpreted is the focus of this elective. Emphasis is placed on proper selection and sequencing of studies as well as the differential diagnostic approach to interpretation. Students are assigned topics to research from the literature based upon clinical discussions. Students are also given the opportunity to participate in conducting clinical trials in radiology research such as interviews and database analysis. To participate students, must complete the CITI training and NIH certification at least 1 week before the elective begins. **(9 credit hours)** **Prerequisite:** **RADI 601 - Senior Radiology Clerkship**

### **DEPARTMENT OF SURGERY**

#### **COURSE DESCRIPTIONS**

**SURG 501 – Surgery Clerkship** - The junior surgical clerkship is served in a twelve-week block in the third year of medical school. During this time, students are exposed to general surgery, the surgical subspecialties and the emergency medicine division at Nashville General Hospital, the Alvin C. York Veterans Administration Medical Center and the Blanchfield Community Army Hospital. Principles of acute trauma life support are incorporated into the rotation. Students are exposed on a rotating basis to evening call and the emergency room. In this role, they serve as a part of the health care team with active participation in the patient's care, under adequate supervision of staff and full and part-time surgical specialists. **(27 credit hours)**

#### **ELECTIVE COURSES**

**SURG 615 – Anesthesiology** - The goal of this course is to train students in the skill of basic airway management. This includes supplemental oxygen support, bag-mask ventilation and tracheal intubation. Intravenous catheter placement is taught, and the student is expected to develop an understanding of inhalation, intravenous and local anesthetics. The student also is expected to actively participate in the perioperative evaluation and management of patients undergoing general and regional anesthesia. **Prerequisite:** **(9 credit hours)** **Prerequisite:** **SURG – 501 Surgery Clerkship**

**SURG 619 - Emergency Surgery** - The basic purpose of this clerkship is to familiarize the student with the diagnostic and therapeutic skills for managing medical emergencies. The student is expected to learn the basic principles of emergency medical care. The student is required to research and present a topic in emergency medicine. **(9 credit hours)** **Prerequisite:** **SURG – 501 – Surgery Clerkship**

**SURG 616 - General Surgery** - This senior elective rotation is four weeks in duration and can be taken upon successful completion of the junior clerkship. The experience is designed to approximate that of an intern and consists of assignments to the operating room, outpatient clinics and inpatient service. Evaluation is made by direct observation of the attending staff.

Students are required to keep a log of their surgical cases and clinical experiences. **(9 credit hours)** **Prerequisite:** **SURG – 501 – Surgery Clerkship**

**SURG 602 – Ophthalmology** - The student is required to review the ocular/orbital anatomy and learn the differential diagnosis of red eye, acute visual loss and chronic visual loss. The student will be taught to recognize the ocular manifestations of systemic disease, especially diabetes mellitus. Also the student will be an active participant in the OR and observe ophthalmic and laser surgeries performed in the clinic. **(9 credit hours)** **Prerequisites:** **MEDI 501- Internal Medicine and SURG – 501 – Surgery Clerkship**

**SURG 611 – Orthopedics** - The student will gain a basic knowledge of the anatomy, physiology and pathology of the musculoskeletal system and a basic understanding of diagnostic imaging studies that are useful in the evaluation of musculoskeletal problems. The student will be instructed in foundational information about the etiology, clinical presentation and treatment regarding diseases and disorders (trauma or non-trauma) encountered in an orthopedic practice. **(9 credit hours)** **Prerequisite:** **SURG – 501 – Surgery Clerkship**

**SURG 612 – Otolaryngology** - The student should be able to perform a thorough head and neck exam and understand the pathophysiology of common head and neck diseases and disorders in both adults and children. The student will be taught to describe common medical and surgical treatment of these problems, indications for surgical procedures and have a basic understanding of audiometry. **(9 credit hours)** **Prerequisite:** **SURG – 501 – Surgery Clerkship**

**SURG 614 – Urology** - The student is expected to acquire a basic fundamental knowledge regarding the etiology, presentation and management of common urologic conditions. Materials for reading and review will be provided to the student at the outset of the rotation. The student will be expected to participate on hospital rounds and assist in the operating room. **(9 credit hours)** **Prerequisite:** **SURG – 501 – Surgery Clerkship**

**SURG 620 – Rehabilitation Medicine** - The student should have a basic knowledge of the anatomy, physiology and pathology of the musculoskeletal system. Students will participate in the outpatient evaluation and management of patients, hospital rounds and will assist in the clinic with spinal cord injury patients. **(9 credit hours)** **Prerequisites:** **MEDI 501- Internal Medicine and SURG – 501 – Surgery Clerkship**

# School of Medicine Faculty

## Basic Sciences Departments

### Department of Biochemistry and Cancer Biology

**Chairperson:** Samuel E. Adunyah, Ph.D., Professor

**Professors:** Salil K. Das, DSC; Maria De Fatima Lima, Ph.D., Josiah Ochieng, Ph.D.; Manuel Valenzuela, Ph.D.

**Associate Professors:** Sakina E. Eltom, D.V.M, Ph.D.; Shawn J. Goodwin, Ph.D.; Olugbemiga Ogunkua, M.D., Ph.D.; Aramandla Ramesh, Ph.D.; LaMonica Stewart, Ph.D.

**Assistant Professors:** Zhenbang Chen, Ph.D.; Chandravani Dash, Ph.D.; Amosy M'Koma, M.D., Ph.D.; Anil Shanker, Ph.D.; Deok-Soo Son, DVM, Ph.D.

**Instructor:** Corey Jones, Ph.D.

### Department of Microbiology and Immunology

**Chairperson:** Fernando Villalta, Ph.D., Professor

**Professors:** Gautam Chaudhuri, Ph.D.; Etheleen McGinnis Hill, Ph.D.; Robert G. Holt, Ph.D.; Stella Nowicki, D.D.S.; Raju Ramasamy, Ph.D.

**Associate Professors:** Minu Chaudhuri, Ph.D.; Bindong Liu, Ph.D.

**Assistant Professors:** Donald Alcendor, Ph.D.; Xinhong Dong, Ph.D.; Pius Nde, Ph.D.

**Adjunct Faculty:** Terence M. Dermody, Ph.D., Professor; Hua Xie, Ph.D., Associate Professor

### Department of Neuroscience and Pharmacology

**Chairperson:** Clivel Charlton, Ph.D., Professor

**Professors:** Sanika S. Chirwa, Ph.D.; Darryl Hood, Ph.D.; Sukhbir S. Mokha, Ph.D.

**Associate Professor:** Twum-Ampofo Ansah, Ph.D.

**Assistant Professors:** Subodh Nag, Ph.D.; Tultul Nayyar, Ph.D.

**Professor Emeritus:** Ralph Cazort, Ph.D.

### Department of Physiology

**Chairperson:** Hubert K. Rucker, Ph.D., Professor

**Professors:** Ifeanyi J. Arinze, Ph.D.; Zhongmao Guo, M.D., Ph.D.; Evangeline D. Motley-Johnson, Ph.D.

**Associate Professors:** Anthony Archibong, Ph.D.; Pandu Gangula, Ph.D.; Hong Yang, M.D.

**Assistant Professor:** Eun-Sook Lee, Ph.D.

### Department of Professional and Medical Education

**Chairperson:** George A. Breaux, M.D., Associate Professor

#### Division of Integrated Didactics:

**Professors:** Emmanuel Atta-Asafo-Adjei, Ph.D.; Mohit L. Bhattacharyya, Ph.D.; John T. Clark, Ph.D.; Susan DeRiener, Ph.D.; Arthur Jackson, Ph.D.; Mohammed A. Maleque, Ph.D.; Alfred A. Nyanda, Ph.D.

**Associate Professors:** Carol Freund, Ph.D.; Shyamali Mukherjee, Ph.D.

**Assistant Professors:** Anita Austin, Ph.D.; Cassandra Ward, Ed.D.

**Professor Emeriti:** Mukul Banerjee, Ph.D.; Fred Jones, Ph.D.; Mark E. Levitch, Ph.D.; Henry A. Moses, Ph.D.; James J. Mrotek, Ph.D.; Dolores Shockley, Ph.D.; James Townsel, Ph.D.

#### Division of Clinical Skills and Competencies

**Director:** Ayodeji Oso, M.D., Associate Professor

**Professors:** Linda D. Sander, Ph.D.

**Associate Professor:** Carolyn Szetela, Ph.D.

**Assistant Professors:** Juanita F. Buford, Ed.D.; Regina Offodile, M.D.; Leonard G. Webster, M.D.,

**Instructors:** Keisha Ashmeade, RN, FNP; Jacqueline Gardner, MA; Adrienne Hicks, M.S.N.;

**Professor Emerita:** Annie W. Neal, Ph.D.

## Clinical Departments

### Department of Family and Community Medicine

**Chair:** Roger J. Zoorob, M.D., MPH, FAAFP, Professor

**Professors:** Paul Juarez, Ph.D.; Robert Levine, M.D.; Charles Mouton, M.D.; Maureen Sanderson, Ph.D.

**Associate Professors:** Sangita Chakrabarty, M.D.; Millard Collins, M.D.; Vincent Morelli, M.D.; Mohamad Sidani, M.D.

**Assistant Professors:** Vincent Agboto, Ph.D.; Sylvia Akohoue, Ph.D.; Muktar Aliyu, M.D., Dr.P.D.; Alanna Beane, M.D.; Nalini Connor, Ph.D.; Sabrina Finney, M.D.; Irwin Goldzweig, MS; Wansoo Im, Ph.D.; Courtney Kihlberg, M.D.; Jeffrey Moore, M.D.; Jayashree Nathan, M.D.; Heather O'Hara, M.D., M.S.P.H; Gerardo Rodriguez, M.D.; Ruth Stewart, M.D.; Avis Turner, M.D.; Jamila Williams, M.D.

**Instructor:** Carol Ziegler, MSN

**Adjunct Professors:** Maciej Buchowski, Ph.D.; Nunzia Giuse, M.D.; Charles H. Hennekens, M.D.; John E. Maupin, Jr., D.D.S.

**Adjunct Associate Professors:** Allen Craig, M.D.; William Runyon, M.D.; James Talmage, M.D.

**Adjunct Assistant Professors:** Cleo Carter, M.D.; Concepcion Clifford, M.D.; Ada-Nkem Emuwa, M.D.; David Horowitz, M.D.; Hanna Ilia, M.D., James Johnson, M.D.; James D. King, M.D.; S. L. Lampkin, M.D.; Carolyn Lightford, M.D.; Melvin Lightford, M.D.; Timothy Linder, M.D.; Gita Mishra, M.D.; Richard Rutherford, M.D.; Marc Watkins, M.D.

**Adjunct Instructors:** Harry Bonnaire, M.D.; Adam J. Carter, RPT; Dennis Carter, M.D.; Robert Hulette, MPH; Venkatt Reddy, M.D.

### Department of Internal Medicine

**Chairperson:** Duane T. Smooth, M.D., Professor

**Professors:** Vladimir Berthaud, M.D., MPH; A. Cherrie Epps, Ph.D.; Marquette Faulkner, M.D.; Margaret Hargreaves, Ph.D.; Jon H. Levine, M.D.; John J. Murray, M.D., Ph.D.; Chike M. Nzerue, M.D.; Wayne J. Riley, M.D., M.P.H., M.B.A.; Steven Wolff, M.D.

**Associate Professors:** Clinton Cummings, M.D.; Michael Floyd, M.D.; Bindong Liu, Ph.D.; Ayodeji Oso, M.D.; Waldemar Popik, Ph.D.; Pradumna Singh, M.D.; James Sullivan, M.D.; David S. Trochtenberg, M.D.

**Assistant Professors:** Selorm Adzokpa, M.D.; Richmond Akatue, M.D.; Sharon Albers, M.D.; Michelle Bruce, M.D.; Michael Buchholz, M.D.; Kehinde Carew, M.D.; Olumuyiwa Esuruoso, M.D.; Monique Forskin-Bennerman, M.D.; Richard Fremont, M.D.; Darryl Jordan, M.D.; Matthew King, M.D.; Jason Martin, M.D.; Kevin Palka, M.D.; Kushal Patel, Ph.D., M.D.; Joanna Shaw, M.D.; Paul Talley, M.D.; Nandakumar Vittal, M.D.; Richard O. White, M.D.

**Adjunct Professors:** Michael A. Doukas, M.D.; Clifton Meador, M.D.; William Moore, M.D.

**Adjunct Associate Professors:** Alfred S. Callahan, M.D.; Walter Clair, M.D.; Ukpong E. Nwankwo, M.D.; Frank Thomas, Jr., M.D.; Dharapuram Venugopal, M. D.

**Adjunct Assistant Professors:** Ajay Bali, M.D.; Stanley Bodner, M.D.; Harvey Bowles, M.D.; Orville Campbell, M.D.; Kodihalli Channabasappa, M.D.; Andre Churchwell, M.D.; Kathleen Figaro, M.D.; Cindy Flack, M.D.; Radhika Gaddipati, M.D.; Yemane Hadgu, M.D.; Nuhad Ismail, M.D.; Joyline James, M.D.; David Jarvis, M.D.; Gajendra Khatri, M.D.; Dhana Maripuri, M.D.; Natasha Meadows, M.D.; Uchenna Okeke-Nnamah, M.D.; Snigdha Priyadarshi, M.D.; Kalvally Sriharan, M.D.; Kumar Tammareddi, M.D.

**Secondary Appointment:** Professor; Harry R. Jacobson, M.D., Professor

### Department of Obstetrics and Gynecology

**Chairperson:** Gloria Richard-Davis, M.D., Professor

**Professors:** Marie del Pilar Aguinaga, Ph.D.; Ayman Al-Hendy, M.D.; Edward Hills, M.D.; Gwinnett Ladson, M.D.; Bogdan Nowicki, M.D., Ph.D.; Janice Whitty, M.D.

**Associate Professors:** Phillip Bourne, M.D.; Ahsen Chaudhry, M.D.; Ada P. Knight, M.D.

**Assistant Professors:** Donald Bruce, M.D.; Teresa Byrd, M.D.; Sunil Halder, Ph.D.; Kimberly Looney, M.D.; Chandrasekhar Thota, Ph.D.; Rudiane Toussaint, M.D.; Vernita A. Tucker, M.D.

**Instructor:** Waseem Khoder, M.D.

**Professor Emeritus:** Henry W. Foster, M.D., Charles McGruder, M.D., Phillip Nicholas, M.D.

**Adjunct Professors:** Nancy C. Chescheir, M.D.; Frank Ling, M.D.; Kevin Osteen, Ph.D.; Robert Summitt, Jr., M.D.

**Adjunct Associate Professors:** Matrice Browne, M.D.; Cornelia R. Graves, M.D.; Katherine Hartmann, M.D., Ph.D.; Barry K. Jarnagin, M.D.; Val Vogt, M.D.

**Adjunct Assistant Professors:** Holly S. Baker, MSN; Ana M. Bircher, M.D.; Samuel F. Brown, M.D.; Richard O. Burney, M.D.; Barbara Clinton, MSW; B. Stephens Dudley, M.D.; Dana Jones, M.D.; Dineo Khabele, M.D.; Gautam Rao, M.D.; Edith Smith Rayford, M.D.; Paul Rice, M.D., P.A.; Anne Shrout, M.D.; Jennifer Tatalovich, M.D.

**Adjunct Instructors:** James Boerner, M.D.; Charles B. Boles, M.D.; Kenneth Carter, M.D.; Kevin Fulford, M.D.; Elizabeth LaRoche, M.D.; Kimberly McGowan, M.D.; Sovana R. Moore, M.D.; Merri Morris, M.D.; Mary T. Moss, M.D.; Shawn Osterholt, M.D.; Karen Puckett, M.D.; Floyd Richard, M.D.; Alvin Singh, M.D.

### **Department of Pathology**

**Chairperson:** Billy R. Ballard, M.D., D.D.S., Professor

**Professor:** Robert Burnette, M.D.

**Associate Professors:** Awadh Binhazim, DVM, Ph.D.; Cecil W. Cone, M.D.; Digna Forbes, M.D.; Dana Marshall, Ph.D.

**Professor Emeritus:** James Story, Ph.D.

**Adjunct Assistant Professor:** John Gerber, M.D.,

### **Department of Pediatrics**

**Chair:** Xylina D. Bean, M.D., Professor

**Professors:** Patricia Matthews-Juarez, Ph.D.; Susanne Tropez-Sims, M.D., MPH

**Associate Professors:** Olayinka O. Onadeko, M.D.; Freida Outlaw, Ph.D., R.N., FAAP; Shahana Choudhury, M.D.

**Assistant Professors:** Vanessa Elliott, Ph.D.; Christopher Keefer, M.D.; Jennifer Ess, M.D.

**Adjunct Professor:** Michael DeBaun, M.D.

**Adjunct Assistant Professors:** Catherine Arthur-Johnson, M.D.; Susan B. Campbell, M.D.; Margreete Johnston, M.D.; Deidre Lanier, M.D.; Lee Anne O'Brien, M.D.; Rachel M. Ricafort, M.D., FAAP; Ida Michelle Williams, M.D.

**Associate Professor Emeritus:** Brahm S. Parsh, M.D.

### **Department of Psychiatry and Behavioral Sciences**

**Chairperson:** Rahn K. Bailey, M.D., Associate Professor

**Professors:** Russell Poland, Ph.D.; Uma Rao, M.D.

**Associate Professors:** Rhonda Cunningham-Burley, Ph.D.; Shagufta Jabeen, M.D.;

**Assistant Professors:** Shahid Ali, M.D.; Mitchell Parks, M.D.; William Richie, M.D.

**Professor Emeritus:** Harold Jordan, M.D.

**Associate Professor Emerita:** Edna Lockert, Ph.D.

**Adjunct Professors:** George W. Arana, M.D.; David Barton, M.D.; Steven D. Hollon, Ph.D.

**Adjunct Associate Professors:** Mohammad S. Jahan, M.D.; Sreenivasa Mogali, M.D.

**Adjunct Assistant Professors:** Estrella Acosta, M.D.; Felix Adetunji, M.D.; Sivaji Bondalapati, M.D.; Lakshmisarojini Botta, M.D.; Millicent Branch, M.D.; Indira Challa, M.D.; Kamish Dantzler English, M.D.; Narcisco Gaboy, M.D., Prasad Kondapavuluru, M.D., Linda Lundin, M.D., Ranjit Mallick, M.D.; Madhusudhan Mudiam, M.D.; Syed Rashid, M.D., Judith Regan, M.D.; Rebecca J. Rossello, M.D.

### **Department of Radiology**

**Chairperson:** Anthony C. Disher, M.D., Professor

**Associate Professor:** Glenfield S. Knight, M.D.

**Assistant Professors:** Laiandrea Stewart, M.D.; Afua Y. Thompson, M.D.

**Adjunct Professor:** Harold Thompson, M.D.

**Department of Surgery**

**Interim Chairperson:** Lemuel Dent, M.D., Associate Professor

**Professor:** Thomas Limbird, M.D.; Flora Ukoli, DPH

**Associate Professors:** Carlton Z. Adams, M.D.; Stephania Miller, Ph.D.; Alphonse Pasipanodya, M.D.; Philip Kregor, M.D.

**Assistant Professors:** Ronald Baker, M.D.; Rudolph Francis, M.D.; Robert Johnston, M.D.; Kendrick Joyce, M.D.; Moses Owoso, M.D.; Tohida Shahrokhi, M.D.; Chasidy Singleton, M.D.; Joseph Taylor, M.D.; Craig Ternovits, M.D.

**Professor Emeritus:** Louis Bernard, M.D.

**Adjunct Professors:** Naji Abumrad, M.D.; Robert Beauchamp, M.D.; Rodney Davis, M.D.; John A. Morris, M.D.; John L. Tarpley, M.D.

**Adjunct Associate Professors:** Gene W. Bratt, Ph.D.; Reginald Coopwood, M.D.; William A. Nylander, Jr., M.D.

**Adjunct Assistant Professors:** Robert K. Johnston, M.D.; Burnette S. Kelly, M.D.; Mark Williams, M.D.

**Adjunct Instructor:** Andrew Hazley, M.D.