



ACADEMIC CATALOG 2026-2027

Medicine · Dentistry · Graduate Studies · Global
Health · Data Science



We teach health *caring*.

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Meharry Medical College



Academic Catalog

Notices

Meharry Medical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award: masters and doctorate degrees. Degree-granting institutions may also offer credentials such as certificates and diplomas at approved degree levels. Questions about the accreditation of Meharry Medical College may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call (404) 679-4500 or access online at <http://www.sacscoc.org>.

The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) has granted Accreditation- Provisional status to the Meharry Medical College Physician Assistant Program sponsored by Meharry Medical College.

The School of Medicine is a member of the Association of American Medical Colleges (AAMC) and is accredited by the Liaison Committee of Medical Education (LCME) 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 accredited by the Association's Commission on Dental Accreditation (CODA).

The School of Applied Computational Sciences of the Southern Association of Colleges and Schools Commission on Colleges.

The Master of Public Health program, which is offered through the School of Graduate Studies, is accredited by the Council on Education for Public Health (CEPH).

Meharry Medical College is an EOE/AA 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, (615) 327-6102.

Disclaimer

The information in this catalog is current and accurate as of August 1, 2026. The College reserves the right to change prerequisites for admission, programs of study, courses, requirements for graduation, tuition, fees, policies, academic programs, lecturers, faculty, teaching staffs and other matters described in the Academic Catalog without prior notice. The Academic Catalog is posted on the College's website. A hard copy of the Academic Catalog may be printed from the College's website or obtained from the Office of Student Services.

Contact Information

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Meharry Medical College Overview

Historical Sketch

Fifty years prior to its formal founding, a family of former slaves who lived in rural Kentucky befriended Samuel Meharry, a 16-year-old Ohio farmer. 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 African-American dentists. The Dental Department also was one of a few colleges 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 as an independent, non-profit academic institution. 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 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 Public Health Program at Meharry Medical College was established in 1974 and graduated its first class of one student in 1978.

In 2018, Meharry Medical College launched the Data Science Institute (DSI) to support the mission and overall goal of excellence to collaboratively enhance and grow its focus on computational sciences. Beginning spring 2021, the DSI was transitioned and elevated to School status. It was renamed the School of Applied Computational Sciences (SACS) and became the fourth and first school on the MMC campus in about 80 years.

Over the years, Meharry has maintained its reputation as a leading educator of highly competent physicians, dentists, biomedical scientists, and public health practitioners. Today, Meharry Medical College 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 800 students each year in its Schools of Medicine, Dentistry, and Graduate Studies and Research. It has remained independent and is accredited by the Southern Association of Colleges and Schools Commission on Colleges. 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 a global academic health sciences center advancing health equity through innovative research, transformative education, exceptional and compassionate health services and policy-influencing thought leadership. True to its legacy, Meharry empowers diverse populations to improve the well-being of humankind.

2026 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.

In 2026, Meharry Medical College will:

- Have an enrollment of more than 1,700, including 900 medical students, 500 dental students and 300 graduate students.
- Enroll students in:
 - Medicine
 - Dentistry
 - Biomedical science
 - Public health
 - Health policy
 - Health economics
 - Medical sociology
 - Data science
 - Physician assistant studies
 - Biomedical engineering
 - Bioinformatics
- Enroll students from across the U.S. and around the world who aspire to improve the lives of disadvantaged populations.
- Have a residential population of at least 1,200 on the “village campus.”
- Be the national model for the delivery of inter-professional training for aspiring students and working professionals.
- Be a leader in data-driven, health equity-focused research in the following areas:
 - Cancer
 - Educational effectiveness and performance
 - Infectious disease
 - Mental and behavioral health/substance abuse
 - Obesity/cardiovascular disease
 - Oral health
 - Precision medicine/health
- Be the trailblazer in defining and implementing a new model for delivering value-based, patient-centered health care:
 - In Nashville

- In rural Tennessee and the Mississippi Delta
 - In urban communities across the U.S.
- Be a national leader in clinical medicine in:
 - Cancer
 - Infectious disease
 - Mental and behavioral health/substance abuse
 - Obesity/cardiovascular disease
 - Oral health
- Have a network of regional, national and international partners to expand our clinical reach and provide additional educational opportunities for students and residents.
- Have a comprehensive multi-specialty group practice composed of technologically adept primary care and specialist physicians, dentists and oral surgeons, advance practice nurses, physician assistants, pharmacists, optometrists, nutritionists, behaviorists, and community health workers who provide value-based, patient-centered health care.
- Collaborate in the design and implementation of focused synergistic community networks that complement MMC's education, research and clinical missions and provide leverage for service engagement opportunities.

Core Values

Meharry Medical College is a community of scholars and learners committed to excellence.

These are our core values:

- Accountability with transparency
- Equity with inclusion
- Respect with collegiality
- Service with compassion
- Integrity without exception

Strategic Priorities (Goals)

The College has adopted five 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.

Establish a performance culture based on excellence and accountability.

- Increase the production of diverse health care professionals and researchers.
- Develop distinctive and pioneering approaches to teaching, health care, research, public health and health policy to achieve health equity.
- Strategically expand reach.
- Build a transformed, sustainable institutional economy.

Campus Facilities

The Meharry Medical College campus is located in north Nashville. The campus is comprised of 18 buildings, an outdoor amphitheater, two parking garages, and several surface parking lots. Following are brief descriptions of campus buildings and facilities.

Biomedical Sciences Building

This building houses the Meharry-Vanderbilt Alliance, Internal Audit, and research laboratories for neuroscience and molecular neurobiology investigators.

Comprehensive Health/Meharry Clinics

This is an administrative/clinical facility. This building houses the Meharry Medical Group, and outpatient clinics for pediatrics, family and preventive medicine, internal medicine obstetrics and gynecology, ophthalmology, dermatology, the Veterans Administration Clinics, and Student and Employee Health Services.

Lloyd C. Elam Mental Health Center and Ross Fitness Center

This building is named in honor of Dr. Lloyd C. Elam, the sixth president of Meharry Medical College. The primary services within this building include psychiatric 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.

George Hubbard Hospital (Old Hospital)

Built in 1931 and named in honor of the first president of Meharry Medical College, 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 departments of Pediatrics, Family Medicine, Internal Medicine, Obstetrics/Gynecology, Surgery, Psychiatry/Neurology, and 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 recently renovated front entrance and first floor offices currently house the Human Resources Office.

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 administrative offices. The offices of the President, Executive Vice President, Senior Vice President for Finance, 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 and Clinical Skills Center. The Simulation Center includes 10 exam rooms, surgery, maternity, trauma, and ICU rooms, and Harvey SIM rooms for medical student training and testing.

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 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.

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. A major restoration and renovation project was completed in 2013, and the building is currently occupied by Marketing and Communications, Office of the Journal of Health Care for the Poor and Underserved, Office of the Senior Vice President for Institutional Advancement and Office of the General Counsel, and Legal Affairs.

Morena Place A & B

Morena Place is a campus housing complex that features one and two-bedroom apartments, rooftop terraces, gathering spaces on each floor, and a fully equipped fitness center. The gated complex is adjacent to the Meharry campus and includes two four-story buildings.

Henry A. Moses Alumni Hall

Henry A. Moses Alumni Hall was the first new building project on Meharry's campus since 1978. The building opened May 10, 2012. The building consists of approximately 6,000 square feet and is used for seminars, receptions, meetings, and community gatherings. The meeting space 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.

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 and the Metropolitan Nashville Hospital Authority. This facility was formerly George Russell Tower of 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. The hospital is accredited by the Joint Commission on Accreditation for Healthcare Organizations (JCAHO). The hospital features in-patient units, a Breast Health Center, cardiac catheterization lab, emergency department, medical imaging, and internal medicine and surgery clinics.

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.

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.

Daniel T. Rolfe Student Center/Anna Cherrie Epps Center for Academic Success and Achievement (CASA)

The Daniel T. Rolfe Student Center presently serves as the Anna Cherrie Epps Center for Academic Success and Achievement (CASA) provides a variety of academic support services for students and professional development activities for faculty. CASA provides meeting and study rooms and a large seminar room for student and faculty use.

Royal Towers

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

Constellation Place

Meharry Medical College Living-Learning Center is located on the corner of 21st Avenue North on the southwest side of Campus. The building is a six-story structure consisting of a single-level parking garage, 126 apartment-style units, flexible teaching spaces and retail spaces. The facility also houses offices, support, resident amenities and outdoor terraces.

School of Dentistry Building

Built in 1979, the School of Dentistry (SOD) Building contains administrative and faculty offices, classrooms, meeting rooms, student lounges, instructional laboratories, dental historical museum, and clinics where students and residents in dentistry provide care to the public. Dental students receive the majority of their didactic education and clinical training

in this building. The building is home to the Iris B. and Wendell Cox Auditorium and the Delta Dental Simulation Lab. This computerized lab includes 40 simulation units, a faculty monitoring center, and offices. The Cox Auditorium and Delta Dental Simulation lab were made possible by significant gifts from the named donors.

Clay E. Simpson Jr. Building

The Clay E. Simpson Building houses the Meharry Center for Health Policy and Masters of Science in Public Health program. The Center for Health Policy was established in 2009. It is a collaborative effort with Vanderbilt University. The Center serves as a think tank for pressing health care issues of the day, increase the diversity of health policy scholars with Ph.Ds. 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 Masters of Science in Public Health program occupies the second floor and basement of the Clay Simpson Building. The building houses faculty offices, study rooms for students, a computer lab, and classrooms for the MSPH program.

Cal Turner Family Center for Student Education

The newest buildings on Meharry's campus is named in honor of Cal Turner Jr., founder and former CEO of Dollar General Stores and a lead donor for the facility. The three story, 80,000 square feet building opened in 2014. It houses the Office of Student Services as well as classrooms, study spaces, a spirit store, an auditorium, executive board room, state-of-the-art kitchen, and 200-seat café-style dining area. The building serves as a hub for small conferences, social events, and educational seminars.

Harold D. West Basic Sciences Building

Named in honor of Meharry's first African American president, the West Basic Sciences Building houses classrooms and teaching laboratories for first- and second-year medical, dental, and graduate students. The building also houses the School'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 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 with a seating capacity of approximately 500. Study rooms also are available for individual and small-group sessions.

Meharry Practice Sites

The Meharry Clinics adjoin Nashville General Hospital and provide primary and specialty patient care. Meharry also provides patient care at the Total Health Medical and Dental Clinic in Antioch, 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, HCA Southern Hills, LeBonheur Hospitals, Detroit Medical Center, Methodist Hospital Indiana, Baton Rouge General Hospital and Richmond Market in Virginia.

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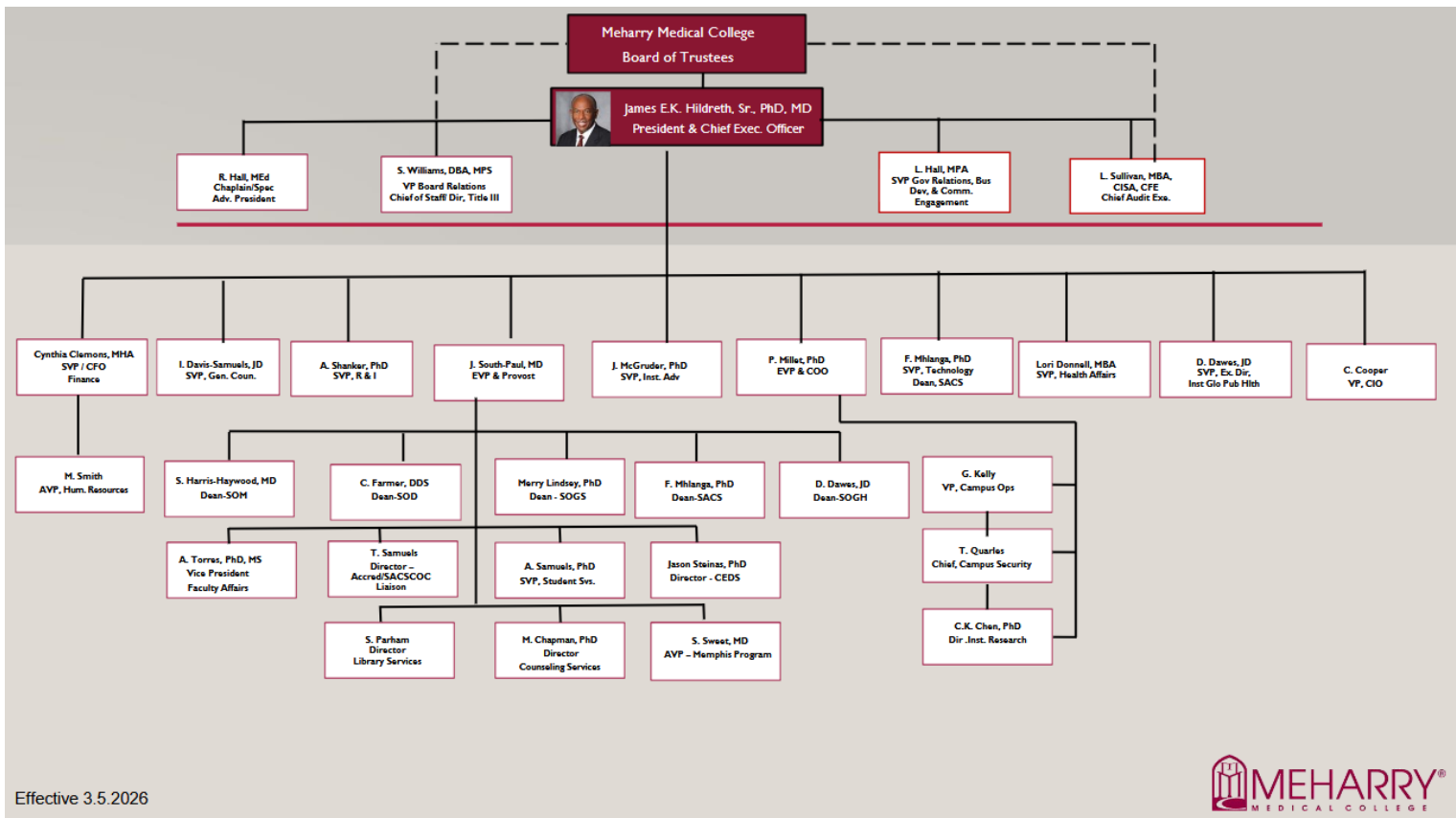
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Meharry Medical College Executive Leadership Organization Chart



Effective 3.5.2026



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, 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 throughout the county. According to the 2015

census, more than 1.8 million people live in the Nashville metropolitan statistical area. The city has two nicknames: “Music City USA,” for the city’s musical heritage, and “Athens of the South,” for the city’s dedication to fine arts and numerous colleges and universities.

Nashville was ranked among the 15 Best Cities in the U.S.¹ because of its flourishing health care sector, cultural diversity, business friendly environment, and companies that have relocated their headquarters to Tennessee. Travel and Leisure Magazine has ranked Nashville number three among America’s Best Cities, number two for best music scene, and number one in friendliness. According to the Nashville Chamber of Commerce, 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 characterized by great dining, sports, shopping, music and theater. Known worldwide for country music and the Grand Ole Opry, Nashville also offers fantastic venues for 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 Nashville Predators (NHL), Tennessee Titans (NFL), and Nashville Sounds (AAA baseball). 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 Campus Housing. Students interested in campus housing should contact: Campus Housing, 944 21st Ave. N., Nashville, TN 37208-3599; call (615) 327- 5751; or email campushousing@mmc.edu. An application for housing is available online at <http://www.mmc.edu/prospectivestudents/housing.html>. The application can be mailed to students upon written request. Returning residents of College housing are permitted to renew their housing agreement. Incoming students receive priority consideration for the remaining available housing.

Constellation Place

Meharry Medical College Living-Learning Center is located on the corner of 21st Avenue North on the southwest side of Campus. The building is a six-story structure consisting of a single-level parking garage, 126 apartment-style units, flexible teaching spaces and retail spaces. The facility also houses offices, support, resident amenities and outdoor terraces.

Morena Place A & B features one and two bedroom apartments, rooftop terraces, gathering spaces on each floor, and a fully equipped fitness center. The gated complex is adjacent to the Meharry campus and includes two four-story buildings. Each unit features high efficiency appliances, including a washer and dryer. Morena Place units are unfurnished. A security deposit is required.

Royal Towers at Meharry Medical College is a 10-story residential complex. Royal Towers units were renovated in 2014. It contains 154 unfurnished efficiency, one-bedroom, and two-bedroom apartments for Meharry students and their immediate family. Each unit is air-conditioned, carpeted, and furnished with a stove, refrigerator, dishwasher and garbage disposal. Laundry facilities are located on select floors and a community lounge is located on the first floor. A

¹ Accolades & Honors. Visit Nashville. s <https://www.visitmusiccity.com/media/tools-resources/accolades-honors>

security deposit is required.

Off-Campus Housing: The Office of Admissions and Records sends Apartment Guides to all admitted students to assist them with finding off-campus housing in Nashville and surrounding communities.

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 and lunch Monday through Friday. The menu is a la carte, with a variety of individually priced choices. Meals are on a pay-as-you-go system. Breakfast is served from 7:00 a.m. to 9:30 a.m. and lunch is served from 11:00 a.m. to 1:30 p.m.

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

Services for Students

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 45 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.

Students have 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 to 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 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 Office of the 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 Office of the 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 Division of Student Affairs. Questions about the application of the provision of the Family Educational Rights and Privacy Act should be directed to the Office of the Registrar or to the Office of the General Counsel.

Confidentiality of Student Records: It is the policy of Meharry Medical College to protect the confidentiality of personally identifiable educational records of students and former students as regulated by the Family Educational Rights and Privacy Act (FERPA).

Academic Computing

The Academic Computing Department is committed to promoting excellence in teaching and learning to the students and faculty and staff of Meharry Medical College. Academic Computing provides support and leadership in the effective uses of technologies for enhancing the classroom environment as well as facilitating research and strategic initiatives related to higher education. Academic Computing fulfills its mission by fostering collaboration and innovation with faculty and the College stakeholders in the design, development, and effective use of learning environments and educational media.

Vision. Academic Computing strives to promote best practices on the integration of technologies in the classroom.

Academic Computing Services include:

- One-on-one technology training as well as group training on all features of Blackboard Learn, Blackboard Collaborate, Respondus 4.0, Lockdown Browser, I-Clickers, MS Office, and other software
- One-on-one technology training as well as group training on all Office 365 programs
- Training on MS Teams, Zoom, VPN, and other shared and virtual classroom technologies
- Training on effective presentations
- Promoting and developing new educational methodologies in the curricula
- Collaborating with Meharry Library staff on Web 2.0 technologies used in higher education (Podcasting, Screencasting, and Videocasting, among others)
- Assisting with instructional course design and development
- Evaluating, assessing, and implementing new technologies
- Improving the use of smart classrooms
- Assisting faculty and students with multimedia projects
- Keeping faculty aware of new teaching strategies with focused articles and training opportunities outside of Meharry
- Assisting with the use of digital textbooks through the Meharry Library
- Instruction in classroom iPad usage as well as other technical equipment
- Training on Tablets, Surface Pro, MAC, and other Windows or IOS systems
- Introduction of classroom gaming technology to faculty

Technologies

- Blackboard Learning Management System
- Lecture Capturing Technology (Blackboard Collaborate)
- I-Clickers (Assessments)
- Respondus 4.0 (Assessments)
- Respondus Lockdown Browser (Assessment Security)
- Zoom and other video conferencing technologies
- MS Office (Word, Excel, PowerPoint, Publisher)

- Office 365 (Skype, MS Planner, One Drive, etc.)
- Kahoot! And other available classroom gaming technologies

The Academic Computing web site highlights supported technologies and also provides tips on technology integration in medical education.

Academic Support: Anna Cherrie Epps, Center for Academic Success and Achievement

The Anna Cherrie Epps, Ph.D., Center for Academic Success and Achievement (CASA) is a comprehensive academic support unit that was established to foster an environment that stimulates and nurtures excellence in learning and teaching in the four schools: Medicine, Dentistry, Graduate Studies, Applied Computational Sciences, and Public Health

CASA is centrally located on the Meharry campus in the Rolfe Student Center Building. The upper level offers three group study rooms, a classroom, two small group study rooms, and a resource room. 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, two rooms for group instruction, and six independent study rooms. The Educational Skills Specialists work individually with students by assessing their academic needs and developing learning plans appropriate to each student's needs. A program coordinator supports the collaborative learning services that provide course-specific academic support to students using peer and professional tutors. The staff works together and with colleagues across the College to ensure that a student's academic learning needs are met. CASA study areas are available to students from

7 a.m. to 1 a.m. daily. For more information about the services provided by the CASA, call 615-327-6500.

Among the academic support services offered by CASA are:

- 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
- Comprehensive Medical Review Program - USMLE STEP 1 and STEP 2
- Comprehensive Dental Review Program – NDBE PART 1, PART 2 and the INDBE

Students with Disabilities

Meharry Medical College recognizes and supports the standards set forth in Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. These laws are designed to eliminate discrimination against qualified individuals with disabilities. Disabilities may include physical or mental impairments that substantially limit one or more of a person's major life activities, which necessitate modifications. Meharry Medical College is committed to making reasonable accommodations for qualifying students with disabilities as required by applicable laws. Accommodations are tailored to meet the needs of each student with a documented disability. Specific concerns pertaining to services for students with disabilities or any disability issue should be directed to the student disability services representative at disabilityservices@mmc.edu or (615) 327-6500 or in person at the Anna Cherrie Epps Ph.D. Center for Academic Success and Achievement (CASA).

Meharry Medical College complies with the American Disabilities Act in allowing use of service animals for students, staff, and visitors. Meharry also complies with the Fair Housing Act in allowing students the use of approved emotional support animals as an accommodation. Please contact the College's ADA Department for more information.

Campus Safety and Security

The Department of Campus Safety and Security (DCSS) is located in the building that formally was known as the Salt Wagon Café. 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 Executive Vice President/Chief Operating Officer. 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 semiannual training to gain additional skills. Prior to employment, officers are required to complete a background check, drug test and 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/police departments 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. The DCSS is 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 \$ 15.00 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 of Security and Director of Campus Safety and Security 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 website. 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, a letter is sent 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.

**MEHARRY MEDICAL COLLEGE
TRAFFIC AND PARKING POLICY
(Revised 01-14-2020)**

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 with the Department of Campus Safety and Security (DCSS). All visitors must also obtain a temporary parking permit from the DCSS. Construction personnel are allowed to park their company vehicle in the MMC designated "vendor" parking, provided the vehicle(s) is clearly marked with the company logo or sign. Generally, unmarked personal or company vehicles are not allowed to park in "vendor" spaces. Exceptions are made for contractors with approval from the Chief of 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 August, annually. Additionally, Student vehicle registration must be completed no later than the last day of August.
- (3) The expiration date on vehicle decals for students and tenants living in campus housing is August 31st of each year. The expiration date on vehicle decals for employees is also August 31st each year. All decals are designed to "cling" to the windshield, which allows an ability to easily remove the decal and use on another registered vehicle. The DCSS reserves the right to cancel decals, if deemed necessary.
- (4) The decal should be affixed to the 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. If in doubt, consult with the Security Dept. for proper placement of the permit. The responsibility of properly displaying the decal rests with the individuals.
- (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) All temporary employees are issued a temporary parking pass in place of a parking decal.
- (8) Temporary employees are not eligible to pay for parking via payroll deduction.
- (9) Temporary employees must pay parking fees before a temporary pass will be issued.
- (10) No student or employee will be allowed to register another person's vehicle or waive their parking fee (this includes spouses).

- (11) Report ownership changes; mutilated or defaced decals are to be turned in to the (DCSS).
- (12) 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.
- (13) It is against College policy to borrow or loan your MMC Parking Decal to others.
- (14) Non-Meharrians who reside in campus housing facilities must pay a separate monthly fee before parking their vehicle on campus property.

B. Decal Replacement Fee or Second Decal

- (1) The student-parking rate covers one vehicle/one parking space. 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 31st).
 - b. The student may elect to receive a "laminated parking pass" to cover the remainder of the parking cycle (thru August 31st). The "pass" must 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 effect.
- (2) Only one "clinging" vehicle decal will be issued to an employee or resident. Lost or stolen employee decals can be replaced in two ways:
 - a. The employee 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 31st). 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 August 31st). The "pass" must be displayed on the left side of the dashboard while parked on campus. Each of the employee's registered vehicles must be listed on the "pass". There will be no extra charge for the "pass", however the normal "per pay period" fees would remain in effect.
 - c. 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 on campus and who does not. Failure to comply with this policy will result in ticketing or towing.

- (3) Persons wishing to cancel/waive parking assignments may do so by completing the appropriate form and the Security Department will process the request. Students who do not utilize parking must submit a MMC Parking Waiver no later than August 15 of each year. The student or employee receives a decal is required to remove the decal from his/her windshield and return it to the DCSS.
- (4) Reimbursement may be requested of persons on extended leave. Upon request for reimbursement, please remove the decal and return it to the DCSS.

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 the DCSS. Student decals are not interchangeable.

(10) Only registrants of vehicles will be responsible for violations pertaining to their vehicle, regardless of who is operating it. The registrant is also responsible 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 the 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 may immediately ticket and tow unauthorized vehicles from handicapped spaces and fire lanes. When vehicles are found illegally parked in handicapped spaces located behind the Dorothy Brown Hall, an attempt will be made to notify the owner before the vehicle is towed. Patrol officers are required to report the make, model, and license plate number to the hospital administrator's office (MMG). The vehicle information will also be reported to the General Hospital information desk for announcement over the intercom. If towed, a vehicle can be located by contacting the DCSS at 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 are written on a vehicle. This policy will also apply when the owner/driver cannot be identified (Non-Meharrian). Chronic violators with a MMC decal are subject to be booted. 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 DCSS. 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 – is 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/vendor is coming on campus to tow, pick up or service your vehicle, call the DCSS and give your name and the person/vendors name that is rendering the service.

(16) Anyone utilizing campus parking facilities and/or parking lots must pay to park. The fee to utilize these areas is subject to change without notice.

D. Penalties and Fines

1. The revocation of a parking permit and/or disciplinary action recommended is warranted for the following: using a permit not properly issued; transferring or allowing a permit to be transferred to another vehicle.
2. The DCSS is open twenty-four hours a day, 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 DCSS may refer any violator of these regulations/policies to the appropriate administrative official for additional action.

E. Enforcement Hours

Parking restrictions and reserved spaces are in effect twenty-four hours a day, seven days a 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 area**
- (5) Parked in crosswalk**
- (6) Blocking driveway/access**
- (7) Failure to stop at stop sign on campus property**
- (8) Illegal use of permit**
- (9) Permit not displayed, or properly displayed**
- (10) Disregarding NO PARKING sign**
- (11) Parked in Fire Lane**
- (12) Blocking Drive, walkways and doors**
- (13) Unauthorized parking in handicap space**
- (14) Unauthorized parking in loading zone**
- (15) Parking on grass**
- (16) Parking at a yellow curb**
- (17) Obstructing vehicular traffic**
- (18) Parking over or beyond curb**
- (19) Parking in a space or area not clearly designated for parking**
- (20) Parking in area in which permit does not apply**
- (21) Parking vehicle and it occupies more than one designated parking space**
- (22) Exceeding time limit**
- (23) Backing into parking spaces with signage mounted on a pole is prohibited**
- (24) Double parking**

***It is against state law to illegally park in fire lanes and handicapped spaces.**

H. Parking Fine Collection:

All parking fines are due 14 days after the violation date and are payable at the Meharry Treasurers Office (located on the 5th floor of the LRC Building) or the DCSS. Credit cards cannot be accepted at the DCSS administrative office.

Parking fines that are not paid on or before midnight on the 14th 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 14th day, but before the 31st day

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

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

Parking fines issued to students, which 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 31st 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, residents, or staff members cited for a parking violation are provided an opportunity to appeal the citation by submitting a written explanation of the circumstances surrounding the issuance of a citation. The original Parking Citation Appeal Form (B) ***must be submitted to the administrative section of the security department within five (5) business days following the issuance of the citation.*** If desired, appeal form (B) may be found on page 8 of this document and printed in advance or obtained from the DCSS Office. The appeal must include a photo copy of the original citation before it is submitted to the administrative section of the security office. The document will be date stamped, logged and the appellant is provided with a copy. The original citation will be date stamped, photo copied and returned.

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 seven-member board to hear or review all appeals and make a recommendation to the Director. The Director is bound by the recommendation of the board. The board will consist of three students; two MMC staff employees, one Non MMC staff member, one DCSS administrative employee who takes notes to be submitted to the chairperson (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 DCSS). 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 appellant must notify the administrative section of the security office at the time the appeal is filed if he/she plans to attend. This protects the privacy of board members who wish to remain anonymous.

The Board will conduct weighted voting of the options considered. The option receiving the most votes will be the recommendation of the Board. The DCSS will attempt to notify the appellant by phone or the internet of the final decision. However, the appellant has the primary responsibility to follow-up with the administrative section of the security office before the 14-day grace period ends.

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 Director of the DCSS or the Board does not have the authority to waive towing fees. All towing fees must be negotiated or appealed to at the tow company.

Parking Citation Appeal Form (B) located below.

MEHARRY MEDICAL COLLEGE
Department of Campus Safety and Security
In case of emergency, please call: 327-6666

1. Parking Citation Appeal Form (B)
 - a. To appeal a MMC parking citation, please complete the top portion of this form and submit it to the administrative section of the DCSS.
2. The appellant must present the original citation when the appeal is filed.
3. Appeals are scheduled to be reviewed on the 4th Wednesday (at approx. 12 noon) of each month. You may call (615-327-6254) or stop by the administrative section of the security office after your hearing date to check the status of your appeal.
4. Submission of this document confirms that you agree to abide by the board's decision.

ALL DECISIONS ARE FINAL

Driver's Name (Print): _____ **Citation #:** _____
License Plate #: _____ **State:** _____ **Date of Citation:** _____
Past Student: _____ **Current Student** _____ **Faculty/Staff:** _____ **Othe** _____
(Indicate) _____

Contact Information: Email _____ **Phone:** _____

Explanation: (Use additional sheet if needed) I hereby request that the above-listed parking citation, issued to me, be voided because:

Signature: _____ Date: _____

STATUS

Date Appealed /was heard by board: ____

The citation stands as written along with maximum fines and penalties

Fine with Penalties _

The citation stands as written, but considers lesser penalties

Lesser Penalty _____

Modify the violation and issue a new citation or warning

New Citation or Warning _

(file the citation and will only come back up if another violation is received within a year of the ticket date)

Nullify the citation (Citation in the files will be noted)

Director DCSS: _____ **Date:** _

Career Counseling

The Offices of Academic and Student Affairs of each school provide career counseling to students. For information about careers in medicine (Careers in Medicine®), dentistry, the biomedical sciences, and public health, please contact these departments within the respective schools. The College's Division of Student Affairs addresses student professional and leadership development. For information on student professional development and student leadership initiatives, please contact the Division of Student Affairs at 615-327-6435.

Counseling & Well-Being Services

Meharry Medical College provides counseling services for students at the Center for Counseling & Well-Being Services on the third floor of the Cal-Turner building. 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, crisis interventions, case management, referrals, coaching, consultation, workshop, as well as academic counseling.

The services of the Center for Counseling & Well-Being Services are broad-based and encompass services to partners of students as well as courtesy consultations to faculty, residents, and staff. Appointments can be made by visiting the Counseling Services at the Cal-Turner building on the third floor between 8 a.m. and 4:30 p.m. Monday through Friday, or by calling (615) 327-6915 or emailing counseling@mmc.edu. Walk-ins are welcome during our business hours. Students can send secure messages to CS staff after hours, and access information about Counseling Services 24/7 by accessing our secure online portal at <https://mmc.medicatconnect.com/>. Students who are experiencing an emergency after hours should contact 911 or go to the nearest emergency room.

All counseling services and records are confidential as mandated by professional codes of ethics and by law. Counseling records do not become a part of academic records. There are no fees for services. When referrals are made to mental and behavioral health providers, the services are normally covered under the provisions of the student's health insurance policy.

International Student Services

The Office of Admissions and Recruitment coordinates the processing of foreign or international student (F-1) Visas 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 admission. For additional information, contact the Office of Admissions and Recruitment at (615) 327-6998 or via email at admissions@mmc.edu.

Information Technology

Meharry Medical College Office of Information Technology provides a range of technology services to students, faculty, and staff supporting the college's academic mission. Services include support for Meharry-owned computer devices, the learning management system, the student information system, and collaboration tools to include email and the Office 365 suite.

Need Assistance?

The Help Desk may be reached at:

- On Campus: HELP (4357),
- Off Campus: (615) 327-6231
- Email: helpdesk@mmc.edu

Mail Services

Mail Services, located on the basement level of the School of Dentistry Building, provides campus post office boxes 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 service hours are 12 p.m. through 4 p.m. Monday through Friday.

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) 327-5962 for more details.

Meharry Medical College Library & Archives

Meharry Medical College Library & Archives (MMCL&A) occupies three floors of the S.S. Kresge Learning Resource Center (LRC) on Albion Street.

Regular Library Hours:

7 a.m. to 1 a.m. Monday through Friday

9 a.m. to 1 a.m. Saturday and Sunday

FACILITY

Three floors provide environments for quiet study, group interaction, research, and reflection. All study spaces on these floors have been updated with new WIFI equipment and wiring.

The main **Computer Lab** is located on the first floor (second floor of the LRC), and the **Electronic Classroom** is located on the library's second floor (third floor of the LRC), the latter of which also is used as a computer lab for students when needed but is available to faculty for conducting classes when desired. Both labs are updated with new Windows computers and seating and newly installed wall monitors and other equipment. Computers in both locations provide access to Microsoft Office applications and multiple browsers, Adobe Reader, Blackboard Lockdown Browser, Exemplify (Exam Soft) testing software, SPSS software, EndNote citation management software, and Graph Pad software. A dry- erase board that spans the length of the wall in the Computer Lab is available for student use. In-house, state-of-the-art technology which enhances student learning includes 1) the ToLTech Sectra Anatomy & Dissection Table, with its accompanying Virtual Human (VH) Education Portal and Virtual Reality (VR) dissection software with VR headset and handsets; and 2) VR clinical scenarios found in Oxford Medical Simulation software, may be accessed by using library computers in the Computer Lab and Electronic Classroom.

The new **Library Lounge** on the library's second floor (third floor of the LRC) provides a quiet place to eat with bistro seating and other lounge amenities, along with ample group study space on the opposite side of the room, which is equipped with large whiteboard tables, rolling seats, and rolling whiteboards for study and collaboration. The library's third floor (fourth floor of the LRC) includes locked study cubicles for high-stakes testing review (for use by one student and by reservation only), study tables and seating, individual study carrels, group study rooms, and modular, moveable seating. To reserve a lockable study cubicle for high-stakes testing exam review, email vsmith@mmc.edu.

COLLECTIONS & CIRCULATING MATERIALS

The library's digital collection may be accessed 24/7 on the **Digital Library** site at <https://meharry.ovidds.com>. Students and faculty must use their Meharry credentials to log into the Digital Library when accessing it from off campus. The "**Off-Campus Login**" button may be found at the top righthand side of the webpage, along with troubleshooting instructions.

The new **Bloomberg Print Collection** is located on the main floor on ready-reference shelves. The collection includes print review materials and flash cards on subjects in the basic and advanced sciences and in medicine, along with atlases, USMLE exam prep guides, specialty board review titles, and handbooks. The loan period is 28 days (about 4 weeks), and library-owned content must be returned on time or checked out again to avoid accruing a late fee or a lock on a student's account.

The **Archives and Special Collections** unit of the library contains historical materials documenting the history of Meharry Medical College and Hubbard Hospital. This unit is closed to tours at this time. Research questions may be emailed to sparham@mmc.edu.

SERVICES

Library staff provide individual and group instruction sessions on the use of digital library resources upon request.

Meharry National Alumni Association

Upon graduation, every Meharry student is invited to join the Meharry National Alumni Association, known as

the MNAA. Alumni retain their ties to Meharry, their respective schools and most importantly, their treasured classmates through the MNAA. The MNAA publishes an Alumni Directory every five (5) years and a quarterly magazine. The MNAA serves as a major fund-raiser for the College. In further support of the College, the MNAA sponsors a number of scholarships, assists 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.

Meharry-Vanderbilt Alliance

A strategic partnership leveraging the strengths of Meharry Medical College and Vanderbilt University Medical Center, the Meharry-Vanderbilt Alliance develops and supports collaborative initiatives and programs in biomedical research and clinical science training. The Alliance provides opportunities for collaboration between Meharry Medical College and Vanderbilt University Medical Center and the communities they serve. The elimination of health disparities is a major focus of Alliance projects.

Karen Winkfield, MD, PhD., executive director, leads the Alliance in expanding its community-engaged research initiatives while continuing to cultivate its existing programs. The Vanderbilt-Miami- Meharry Center of Excellence in Precision Medicine and Population Health, enables research using precision medicine to eradicate health disparities. As Director of the Meharry-Vanderbilt Community-Engaged Research Core in the Vanderbilt Institute for Clinical and Translational Research, she leads the development of novel approaches to community and stakeholder engagement including the Community Engagement Studio, a consultative approach method of engagement that allows researchers to obtain direct input from stakeholders regarding the relevance of the research to their preferences, needs and values.

Alliance Pillars:

Research - Research in the Alliance follows the principles of partnership and community engagement, emphasizing the engagement of patients and community stakeholders in all phases of research. It addresses health disparities, health interventions, participant engagement, and patient-centered outcomes in health care. Some aspects of what we do include:

- **Inter-institutional collaborative research support**
 - Connecting faculty for collaboration
 - Identifying research resources and facilitating resource access, including letters of support
 - Placement support for Applied Research Experiences for MPH, MSPH, and MD students
 - Supporting inter-institutional career development programs for faculty, staff, and students
- **Home for the Precision Medicine and Health Disparities Collaborative (PMHDC)** - building and using inter- institutional collaborative resources for understanding precision medicine across racial, ethnic, and socioeconomic status boundaries
- **Community Engagement** - The Alliance community engagement pillar builds bridges and strategic partnerships across Meharry, Vanderbilt, and community organizations to promote health equity. To this end, we:
- **Strategic Partnerships** | Develop and support strategic partnerships focused on health issues of mutual concern
- **Community Assets** | Seek to understand issues impacting the community and leverage community assets
- **Evidence-Based Practices** | Foster the use of evidence-based practices in community engagement programming
- **Cross-Sector Collaboration** | Bring together multi-sector collaboratives, and support community-lead collaboratives to advance community health
- **Capacity-Building** | Engage in teaching and training to build capacity to address health issues of mutual concern
- **Health Equity** | Support mutually beneficial research partnerships and scholarly activities that promote health equity, improving the possibility that everyone has an opportunity to attain his or her

highest level of health

- **Making Connections** | Connect community partners to resources at Meharry and Vanderbilt, including faculty expertise and student service learning opportunities
- **Learning Opportunities** | Provide students with opportunities to learn about community health improvement and community engagement; enhancing the ability of students to impact community health

Examples of community engagement efforts that the Alliance support include:

- **Safety Net Consortium of Middle Tennessee** (SNC) was created In May 2000 to provide access to appropriate levels of care for the uninsured population of Nashville through the establishment of a system of information and care coordination. One of the projects of the SNC is [My Health Care Home](#), a website that facilitates connection to medical homes, particularly for individuals who are uninsured or underinsured. For more details on the Safety Net Consortium, visit <http://sncmt.org/>
- **TN Community Health Worker Collaborative** was developed in 2016 as a response to an emerging need for education, support, and advocacy of the Community Health Worker (CHW) profession in Tennessee. The collaborative is a group of organizations focused on advancing the Community Health Worker (CHW) profession in Tennessee. To learn more, please visit <https://www.vumc.org/meharry-vanderbilt/community-health-worker-collaborative>.
- **Faith and Health Collaborative** is a partnership with the Nashville Health Disparities Coalition, the Faith and Health collaborative brings together congregations to recognize faith-based efforts that promote health equity and to build capacity of congregations to address community health. To access more information on the Faith & Health Collaborative, please visit <https://www.vumc.org/meharry-vanderbilt/faith-and-health-collaborative>
- **Diabetes Improvement Project** (DIP) of the Consortium of Safety Net Providers of Middle Tennessee has been meeting since 2010. The DIP brings safety net clinic providers and community-based organizations together bi- monthly to share lessons learned, promote sharing of information on diabetes management and prevention and to discuss opportunities for collaboration. For more on DIP, please visit <https://www.vumc.org/meharry-vanderbilt/diabetes-improvement-project>.
- **Interprofessional Education (IPE) & Inter-Learning Collaborative Learning** - Since its inception in 1999, the Meharry-Vanderbilt Alliance has sought to create innovative avenues for interprofessional and educational collaboration that not only allow students and faculty to share and apply their knowledge, but also leave a lasting impact on the community. Our developing programs leverage the strengths of the Meharry-Vanderbilt Alliance and its existing IPE faculty collaborative. This inter-institutional, interprofessional design aims to:
 - Support opportunities for shared IPE curriculum
 - Utilize community-engaged, service learning platforms to create mutual educational and community benefit
 - Build capacity and expose students and educators to interprofessional competencies
 - Collaborative Programs - All collaborative projects capitalize on the strengths of health-related programs in the Nashville area and their faculty to foster lasting connections, broaden professional networks, and encourage continued communication. Our current faculty collaborations include the use of a professionally diverse inter- institutional committee that guides all collaborative IPE efforts that extend beyond Vanderbilt and Meharry. Capacity building for partnering institutions and internal IPE programs housed at Meharry and Vanderbilt allows program representatives to work in conjunction with Alliance staff to identify their needs and take an active role in strengthening their program's IPE capacity.
- **Student Projects** - The IPE Student Project provides students from participating health profession programs the opportunity to collaborate with community partners in a real-world setting and to create

a lasting impact on underserved, high-risk populations. Guided by our partnering community organizations, teams of professionally diverse students create and implement plans of action to address real community defined needs.

Meharry-Vanderbilt Student Alliance (MVSA) - To be a model of independent, student-driven, interprofessional collaboration that offers opportunities for students across institutions to connect with community partners, work together and share institutional resources to improve population health. The MVSA is an exciting and innovative opportunity for young professionals to shape a student-led organization to meet their emerging professional development needs. Shared resources and opportunities for community engagement provide a uniquely collaborative experience for students seeking to have a meaningful impact on community health.

Who We Are and What We Do –

- **Organizational Leads** – Student representatives from each institution work together to develop and facilitate activities
- **Scholarly Opportunities** – Professional Development; Navigate Resources, Connect with Community Partners, Inter-Institutional Networking
- **Previous Events** - Back to School Picnic in the Park, Whose Central Line is it Anyway?, Meharry-Vanderbilt Soccer Game, A Film Viewing of “The Immortal Life of Henrietta Lacks” and Panel Discussion, Youth Encouragement Services: Christmas Store

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. Students attend some events offered by the Office of Lifelong Learning to complement their academic coursework.

Meharry Medical College is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education CME for physicians. (*AMA PRA Category 1 Credits*). Meharry Medical College School of Dentistry is an *ADA CERP Recognized Provider*. (American Dental Association Continuing Education Recognition Program.)

Religious Accommodations

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 on the first floor of the Cal Turner Family Center for Student Education, Suite 106.

Religious Accommodations Policy Statement. Meharry Medical College acknowledges the diversity of its students and respects the rights of students to observe their religious beliefs and practices. MMC will endeavor to provide reasonable accommodations relating to a student's religious beliefs and practices in response to a formal written request. However, accommodations cannot be guaranteed in instances where such would create an undue burden on faculty, including a disproportionate negative effect on other students who are participating in the scheduled educational activity, or jeopardize patient care.

Procedure. Students beginning a new program of study at Meharry Medical College will be advised of the school-, program- or course-specific procedures that should be followed to obtain an accommodation for religious practices or observances. Students are encouraged to be proactive in reviewing college-, program- and course-specific assignments/activities in advance of matriculation/registration to determine whether these requirements might in some way conflict with their religious beliefs, practices, or observances. Should such conflicts be in evidence, students should discuss possible options with the appropriate college official or faculty member. Reasonable accommodations may not be feasible in instances where there is a direct and insurmountable conflict between religious beliefs or observances and requirements of a given program. It is the student's responsibility to make arrangements with the course instructor or clerkship/experiential director as soon as possible, but no less than 30 days in advance of the religious holiday during

which the student is requesting to be absent. It is also the student's responsibility to meet all course obligations. Such requests are required for any and all educational activities scheduled for the date(s) in question, e.g. classroom exercises, laboratory assignments, exams, clinical/experiential assignments, etc. Finally, students are obligated to abide by the policies and procedures on religious practices and observances of any given patient-care institution (i.e., hospital, clinical setting) in which they are completing a portion of

their educational experience. If a potential conflict between a student's religious beliefs, practices or observations and institutional policy is identified, the student is to bring such to the attention of the clerkship/experiential director as soon as possible.

It is the course instructor or clerkship/experiential director's responsibility to negotiate with a student the parameters of reasonable accommodations. The accommodations should be no more difficult than the originally scheduled activity or assignment. Instructors or experiential directors are not obligated to provide materials or experiences to students that would not normally be provided to all other students. In the event a student and instructor or clerkship/experiential director cannot reach an agreement regarding reasonable accommodations, the student may request a review of the request by a designated college official. The decision of the designated college official will be final.

Student Directory Listings

Students are listed in the online directory that is published in Banner Student Self-Service & Workday.

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

Student Health Insurance

Meharry Medical College sponsors a group student health insurance plan. This process is done in Human Resources. All students must have health insurance. A 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 whether on or off campus.

The plan covers students for one academic year at Meharry Medical College from July 1st to June 30th. Insurance coverage must be renewed each year. Below are the 2026-2027 annual premium rates for the bundled health insurance package. One-half of the annual premium is billed each semester.

Coverage Level	Annual	Semester	Monthly
Student Only	\$6,140.16	\$3,070.08	\$511.68
Student + Spouse	\$11,960.04	\$5,980.02	\$996.67
Student + Child (1Child)	\$12,101.76	\$6,050.88	\$1,008.48
Student + All Children	\$17,874.76	\$8,937.38	\$1,489.56
Student + Family(Spouse & Children)	\$24,033.76	\$12,016.88	\$2,002.81

Fees include medical, dental, and vision coverage

Medical & Vision Provider: **United HealthCare Student Plan: 1-800-767-0700**

Dental Provider: **Delta Dental of Tennessee: (800) 223-3104**

For enrollment or waiver questions, please email studentinsurance@mmc.edu. Visit the Meharry Medical College Student Insurance webpage [here](#) for more information about your medical, vision, dental and long-term disability insurance.

Mandatory Bloodborne Pathogen Exposure

Medical, Dental and Ph.D. students are enrolled in the mandatory pathogen exposure/accident coverage which provides a benefit in case a student is exposed to blood or other body fluids through a needle stick or body fluid splash/spill event. This coverage cannot be waived

Maximum Benefit per Incident	Deductible	Premium
\$20,000	\$0	\$12 per year

Student Health Services

The Student and Employee Health Clinic is located in the Meharry Comprehensive Health Building, on the 3rd floor, suite

331. The Clinic is open Monday-Friday, 8 a.m.to 4:30 p.m except major holidays. To better accommodate students' busy schedules, appointments are encouraged. Same-day appointments are available for things such as flu shot or TB skin test. The telephone number for appointments is 615 327-5757.

The student health fee provides all current Meharry students access to the services provided at the Student and Employee Health Clinic. The clinical staff is comprised of a certified family nurse practitioner and clinical faculty from the Department of Family and Community 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 and Employee Health Clinic 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 or if the clinic is closed for unforeseen reasons, 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.

Physical Examination

Prior to registration, all students entering Meharry Medical College are required to have the Health Surveillance/Physical Examination forms completed by a health care provider. The physical exam should be performed within the last 12 months. If you or your health care provider have questions, please email Student Health Service, shs@mmc.edu for assistance.

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. 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.

Prior to registration, all students entering Meharry Medical College must provide a hard copy of an immunization record for measles, mumps, rubella, varicella (chicken pox), tetanus, diphtheria, pertussis, polio and Hepatitis B. A hard copy of the actual lab results of the quantitative serologic titers must also be submitted. Documentation of the results of tuberculosis screening within the last 6 months (PPD) is also required. Student and Employee Health providers will review all documentation submitted to determine adequacy. Students who cannot provide adequate documentation of prior immunization or physician diagnosed diseases (as indicated by serological evidence) must receive immunizations to these diseases prior to the beginning of the fall semester of the said academic year.

Required Immunizations and Quantitative Serologic Titers:

- Hepatitis B vaccinations: documented series of 3 vaccines and Hepatitis B surface antibody quantitative serologic titer
- MMR (measles, mumps, rubella): documented series of two doses and quantitative serologic titers
- Varicella: documented series of two doses and quantitative serologic titer or documented date of disease and quantitative serologic titer.
- Tetanus/Diphtheria/Pertussis: documentation of Tdap vaccine after age 19 must be provided
- Polio: documentation of last immunization
- Tuberculosis Screening: within the last 6 months: PPD or IGRA result or documentation of previous positive PPD, subsequent treatment and most recent chest x-ray report (within the last 6 months)

Veteran Students

Veteran Affairs (VA) educational benefits are available to qualified veterans, reservists/guardsmen, spouses and children of 100% service-connected deceased or disabled veterans who apply for funding through the Registrar's Office and are approved by the VA. In order to receive VA education benefits for pursuit of a program of education, students must maintain satisfactory attendance and academic progress. The VA will discontinue educational assistance to those who do not maintain satisfactory attendance and progress.

Any covered individual will be able to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under chapter 31 or 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website – eBenefits, or a VAF 28-1905 form for chapter 31 authorization purposes) and ending on the earlier of the following dates:

1. The date on which payment from VA is made to the institution.
2. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

Meharry Medical College will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional

funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

To establish eligibility for Veteran Affairs Educational benefits, students must submit an Application for VA Education Benefits to the Department of Veteran Affairs online through VONAPP

(<http://www.vabenefits.vba.va.gov/vonapp/default.asp>). Students must also contact a School Certifying Official (SCO) in the Office of the Registrar and submit the Certificate of Eligibility, Certificate of Release or Discharge from Active Duty form (DD-214), and the VA Enrollment Certification Request form. The VA Enrollment Certification Request form must be submitted to the Office of the Registrar each term to confirm the student's eligibility for and wish to access VA benefits. The VA Certifying Officials are available to assist students with this process. They can be contacted at recordsdepartment@mmc.edu or (615) 327-6466.

Student Life

Student organizations sponsor many community centered, educational, and 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 and graduate school manageable. Intramural sports are an important part of the social agenda at Meharry. Co-ed kickball, co-ed basketball, and other recreational activities such as Zumba, fitness boot camp, 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, and televisions. Surrounding community facilities are utilized to support recreational programs such as softball.

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, a treasurer, a student observer to the Board of Trustees, Miss Meharry and 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.

Student Organizations

With more than 50 approved student organizations, Meharry students have the opportunity to develop and participate in community involvement, social, and cultural activities.

Visit https://mmc.campusgroups.com/club_signup 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
- American Medical Association-Medical Student Section
- American Student Dental Association
- Ewell Neil Dental Research Society
- Graduate Student Association
- Division of Public Health Practice Student Association
- Greater Nashville Technology Council
- American Academy of Physician Associates

Students interested in forming a new campus organization should contact the Office of Student Life.

Student Admission & Enrollment Services

Overview

Through collaborative efforts across the College community, the Division of Student Affairs formulates strategies and develops programs and services designed to achieve success in the enrollment, retention, and graduation goals of the College. The Office of Admissions and Recruitment, more specifically, manages recruitment activities for all Schools and provides information about the admission process to both internal and external constituents. The Director of Admissions and Recruitment serves as an ex-officio member of the respective Admissions Committees and a voting member of the Levi Watkins & MSEAP Committees. The Director of Admissions & Recruitment works with the Office of the Registrar to maintain the matriculation records that pertain to each first-year student.

Admissions Process

In keeping with the mission of Meharry Medical College and the institutional goals set forth by campus administration, the Office of Admissions and Recruitment coordinates the admission processes for the Schools of Dentistry, Graduate Studies & Research, and Medicine whereby applicants are recruited to the institution, assessed for suitability for admission, offered acceptance, and matriculated into their respective first-year classes. In advancing the College's retention efforts, the ultimate goal is to recruit students who are a strong institutional fit and who will be the strongest carriers of the Meharry legacy.

All applicants must complete the appropriate application for their respective School of interest. Application materials may be obtained online on Meharry Medical College's website under the Admissions section at <https://home.mmc.edu/admissions/>. Additional information may be obtained from the following web sites for the Schools of Dentistry, Graduate Studies & Research, and Medicine.

- **Dentistry:** The American Association of Dental Schools Application Service (AADSAS) application is available via the web at www.adea.org. The application deadline for which to submit an AADSAS application to the D.D.S. Degree Program is December 15 of the year prior to matriculation.
- **Graduate Studies:** The School of Graduate Studies applications (GradCAS, PostBacCas, CASPA) are available via the web at <https://home.mmc.edu/admissions/school-of-graduate-studies-research/>. The application deadline is March 31st for the Ph.D. Degree Program, March 31st for the MHS Degree Program, and August 15th for the Physician's Assistant Degree Program.
- **Medicine:** The American Medical College Application Service (AMCAS) application is available via the web at www.aamc.org/amcas. The application deadline for which to submit an AMCAS application to the M.D. Degree Program is December 15 of the year prior to matriculation.
- **Applied Computational Sciences:** The School of Applied Computational Sciences applications

are available via the web at <https://go.mmc.edu/apply/>. The application deadline for which to submit an application are as follows: Dec. 1: Priority deadline for application

- **Global Health:** The School of Global Health applications (SOPHAS) are available via the web at <https://go.mmc.edu/apply/>. The application deadline for which to submit an application are as follows:

Priority Deadline for Scholarship consideration – December 1

General Deadline – May 1

April 1st for the M.P.H. Degree Program of the year of matriculation.

*All documentation must be submitted by deadline date.

Each applicant must complete the following steps:

- **Complete and submit an Admissions Application**
- **Submit transcripts.** Dental, Graduate and Medical applicants send transcripts to the application service (AMCAS, AADSAS, SOPHAS, CASPA, PostBacc, GRADCas).
- **Complete and submit a Supplemental Application.** Only Dental and Medical applicants are required to complete a Supplemental Application. Medical Supplemental Applications are by invitation only. Once the AADSAS or AMCAS application is received, the Office of Admissions and Recruitment will forward instructions to the applicant for completion of an electronic Supplemental Application
- **Submit letters of recommendation.** Three letters of recommendation are required for applicants to the 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 sent to the respective application services (SOPHAS, CASPA, PostBacc, GRADCas).
- **Admission Tests.** All applicants are required to take the Admissions Test for the program to which they are applying (i.e.: MCAT, DAT, GRE).

Dental School: Dental Admissions Test (DAT): Dental applicants and MHS Dental track applicants must take the Dental Admission Test (DAT). DAT exams taken after December 15 of the year prior to matriculation will not be considered for admission. MHS Dental track applicants must take the DAT by January of the year of matriculation. Additionally, DAT scores older than three years of the year of matriculation will not be considered for admission. For more information about http://www.adea.org/dental_education_pathways/aadsas/Applicants/Pages/RegisterfortheDAT.aspx

Graduate School—Ph.D. & M.P.H.: Graduate Record Examination (GRE): Graduate School applicants must take the Graduate Record Examination (GRE). GRE tests taken after February 17 for Ph.D. candidates and May 1 for M.P.H. candidates of the year of matriculation will not be considered for admission. Additionally, GRE scores older than three years of the year of matriculation will not be considered. For more information about the GRE, visit the website: <http://www.ets.org/gre/>.

Medical School: Medical College Admissions Test (MCAT): Medical applicants and MHS Medical track applicants must take the Medical College Admissions Test (MCAT). MCAT exams taken after December 15 of the year prior to matriculation will not be considered for admission. MHS Medical track applicants must take the MCAT by January of the year of matriculation. Additionally, MCAT scores older than three years of the year of matriculation will not be considered for admission.

For more information, visit the website: <http://www.aamc.org/mcat>.

Complete applications are reviewed by the respective Admission Committees and selected applicants are invited for interviews. Once selected for an interview, applicants are notified by the Office of Admissions and Recruitment. Once conducted, an evaluation of the interview is submitted to the Admissions Committee for final action. Once final action is taken, the Office of Admissions and Recruitment notifies each 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. Medical applicants also submit an enrollment deposit of \$1500. The deposit is applied to the tuition of the matriculating student. If the medical applicant withdraws their application on or before April 30, the \$300 deposit 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 Division of Student Affairs and is a mandatory one-day program for all incoming first year students. This program is designed to introduce new students to the College. During New Student Orientation, students receive pertinent information that will help them to succeed at Meharry Medical College. All three schools have their respective orientation programs beginning after New Student Orientation.

Commencement

A student is eligible for graduation if he/she has satisfactorily completed the academic requirements outlined in each school's Academic Policy and Procedures Manual, including the completion of passing of USMLE, Step I and Step 2 exams (SOM), NBDE, Part I and Part II exams (SOD), and submitting a final approved thesis or dissertation (MSPH and 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.P.H., M.H.S., M.S.C.I. and Ph.D. degree. Degrees are awarded at the commencement exercise held on the third 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. May's confirmed graduates are allowed a thirty-day (30) grace period to complete all degree requirements.

Name Change

A currently enrolled student may file a request for a name change with the Office of the Registrar. A notarized Request for Name Change 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.

The electronic version of the Request for Name Change form can be found on the Office of the Registrar website (<https://home.mmc.edu/wp-content/uploads/2017/06/name-change.pdf>).

Registration

A student cannot register until he/she has received official notification of admission to the College and confirmed his/her intent to attend. Registration is completed online by students via Workday where applicable or by the Office of the Registrar.

Once registration is completed, tuition and fees are assessed, and the academic registration process is complete. Payment of tuition and fees is handled by Student Financial Services (615) 327-6220. To determine registration status, students can log in to Workday ([Sign In \(mmc.edu\)](#)) to view all courses scheduled, financial aid awarded, and account balances.

Please note: Submission of a schedule does not validate registration. If holds exist, registration is not permitted. 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.

Request for Duplicate Diplomas

A certificate of graduation may be reissued upon receipt of a notarized statement confirming that the degree was lost, stolen, or damaged. An exact duplicate 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.

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) 327-6466; fax, (615) 327-6228.

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

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 of no cost. There is a three (3) to five (5) business days processing time for all requests. However, during busier times, such as registration and graduation, processing times may vary. Processing time does not include delivery time from the United States Postal Service.

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Transcript requests can be submitted online for current students and for alumni via the Registrar's Office website (<https://home.mmc.edu/student-affairs/student-life/registrar-office/>). All other requests can be submitted online via the Enrollment/Degree Verification form, also found on the Registrar's Office website. Students and alumni must check with the recipient prior to uploading forms to see if they require the original document be submitted, as well as if your original signature (not a scanned/electronic copy) is required.

Meharry Medical College has authorized the National Student Clearinghouse to provide degree/education verifications for third parties requesting degree/education verifications via www.degreeverify.org.

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)
- Last 4 digits of Social Security number or Student ID number
- Daytime phone number & 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, email, or mail
- Requester's handwritten signature

General Financial Information

Student Financial Aid

Approximately 90% of Meharry's student body relies on some type of financial assistance to aid them with financing their health professions education. Student financial aid is the monetary support that is available to help students pay educational expenses including tuition, fees, room, board, books, supplies, etc. to attend a college or university. Meharry Medical College's Office of Student Financial Aid assists students by providing an avenue to a broad range of funding sources, which contributes to securing financial options for worthy and qualified students. Most financial aid is awarded in accordance with a demonstrated need for assistance, as determined by a federal methodology calculation on the Free Application for Federal Student Aid (FAFSA). Students are advised and counseled on all financial aid programs available. Meharry Medical College's financial aid options include grants, scholarships, loans, and federal work-study programs to eligible students. Meharry participates in the student 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. Many of the College's institutional scholarships are awarded based on criteria specified by donors, and some include outstanding academic performance. Recipients are selected by each school's Scholarship Committee. Currently, there is not an application process used in the awarding of Institutional Scholarships.

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 or finaid@mmc.edu) 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 <https://home.mmc.edu/financial-aid/>.

Disbursement of Aid

The Office of Student Financial Aid certifies and originates loan funds through the U. S. Department of Education's Federal Direct Lending loan program. Students are no longer able to borrow federal loan funds through private lenders in order to fulfil their cost of attendance. All federal loan proceeds are disbursed under one umbrella and by one lender, the U. S. Department of Education. Financial Aid student loan funds will be disbursed to the student's account on or after the first day of class, at the beginning of each semester. Treasury Services is responsible for the disbursement of funds.

Disbursement of Excess Payments/Living Expenses Funds

Funds received in excess of the total tuition and fees charges for the semester (living expenses) will be disbursed (refunded) to the student within five (5) business days after the first day of class each semester. Meharry Medical College participates in Direct Deposit to transfer all student refunds to the student's designated checking or savings account. Students, who have not established a bank account with a financial institution, are encouraged to set up an account with an institution, of their choice; however, they can elect to have their refunds generated by a paper check payable to the student (this is not recommended). The Direct Deposit Agreement, with required support, must be submitted to the Office of Student Financial Aid.

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 can recur up to four years of study, as long as, the recipient maintains the required 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. The Scholarship Committee selects all scholarship recipients.

Additional scholarship information is available in the Office of Student Financial Aid and/or the Offices of Student/Academic Affairs in each school. For more information contact: Office of Student Financial Aid, Division of Student Affairs, Meharry Medical College, 1011 21st Avenue, N., Suite 120, Cal Turner Family Center for Student Education, Nashville, TN 37208; Office: (615) 327-6826; Fax: (615) 327-6951; E-mail: finaid@mmc.edu.

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 Student Financial Services office 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.

Student Accounts Receivable

Student Accounts acts as a clearinghouse for various charges and credits that are placed directly on the student's tuition account by departments and offices of the College. The office manages the billing and collection of student accounts, provides customer service, and account analysis to students.

Payment of Tuition and Fees. Every student who registers at Meharry Medical College incurs a financial obligation to the College. Payment of tuition and fees is due at the point of registration and are the financial responsibility of the student. 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 Attn: Student Financial Services, 1005 Dr. D. B. Todd, Jr. Blvd., Suite 511, 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 deferred payment contract is a semester based plan, requires an initial payment of one-fourth of the balance due plus a \$25.00 contract service fee, and must be approved by the Dean of the respective school. 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 on transcripts, and are ineligible to receive a diploma upon completion of degree requirements.

Billing Schedule. Bills are mailed on the 15th of each month to the student's Meharry Medical College account and are due in full by the first business day of the following month. Charges applied to the student's account during the semester will be due at the point of assessment or upon receipt of the monthly Student Account Statement.

Payment Information. Payments can be made with personal check, cashier's check, money order, wire, or a debit/credit card. Checks should be made payable to Meharry Medical College in U.S. Dollars; for non U.S. funds, the difference in exchange rates and bank collection charges will be charged to the student's account.

Refund or Credit Balance. Any student who has a refundable credit balance will receive a refund within five

working days of the creation of the credit balance. The first date for refunds for each semester is in compliance with federal mandates. After the first refund date in each semester, refunds will be processed twice weekly. If an account has a refundable credit balance by noon on Monday, a refund will be processed and available no later than the following Friday. If an account has a refundable credit balance by noon on Wednesday, a refund will be processed and available no later than the following Wednesday via direct deposit.

Delinquent Student Accounts – Financial Holds. Outstanding balances will prevent a student from registering for any subsequent semester and may jeopardize continued enrollment with the College. The College also reserves the right to refuse to furnish grades, transcripts, certificates, diplomas, letters of honorable dismissal or recommendation for students who fail to pay their student account balances.

Mailing Address/Location to Remit Payment: Meharry Medical College, Student Financial Services, LRC Bldg., 5th Floor, Suite 511, 1005 Dr. D. B. Todd, Jr. Blvd., Nashville, TN 37208. Please be sure to include your name and account number on your check when you remit student payments to assure proper credit.

The cashier's window is located on the 5th floor of the Kresge Learning Resource Center. The cashier/disbursement window is open Monday through Friday during the hours of 9 a.m. to 1 p.m. and 2 p.m. to 4 p.m.

Student Campus-Based Loans

This unit of Student Financial Services is responsible for managing and collecting institutional and federal campus-based loan programs. The institutional loans are Edgar G. and Lillian Rios Endowed Revolving Loan and Eloesser Revolving Loan Fund. The campus-based programs include Federal Perkins, Health Professions Student Loans (HPSL), Loans for Disadvantaged Students (LDS), Primary Care Loans (PCL).

A student's account will not be credited with loan funds until the student has completed an on-line entrance interview and signed a Promissory Note. 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 Office of Student Financial Aid 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. Heartland Campus Services ECSI, our billing servicer, will notify the student by email to complete an entrance interview electronically. Once the student completes all required documentation, and signs the promissory note, the campus-based loan funds are credited to the students' account. If a credit balance is created, a refund is processed.

Once the student/borrower enters repayment, information and applications for deferment, forbearance, and cancellation can be obtained from www.heartlandecsi.com or by contacting our office at 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 managers are available to provide repayment assistance, including information about consolidation and loan habilitation.

Tuition Refund Policy/Return to Title IV Funds (R2T4) Policy

Meharry Medical College has adopted the U. S. Department of Education's refund policy (*Department of Education, Student Financial Aid Handbook, Volume 5, Chapter 1, 2012-2013 Award Year*) for all students who find it necessary to withdraw from the College or take a leave of absence during the academic year. It is a universal policy that applies to all students, those receiving and not receiving federal financial aid. Students who elect to withdraw or take a Leave of Absence during the academic year must submit prior written notification to the appropriate Academic Dean according to the procedures specified in the Academic Catalog for their program. Meharry Medical College may amend its institutional refund policy at any time. Amendments will become effective for the academic year that follows official notification of the amendment. Any questions concerning Meharry Medical College's refund policy should be directed to the Office of Student Financial Aid.

The formula is as follows:

The number of days completed in the semester in question / total days in semester = the percentage (%) of earned aid. If the percentage is greater than 60%, then 100% of the funds are earned and no refund or return is required.

NOTE: 60% of the term usually averages out to be about 2 ½ months.

The same percentage will be applied to tuition and fees with the exception of the following fees, which should be maintained at 100%:

- Registration
- Orientation (first year students only)
- Health insurance (which will continue until the end of the semester)

Students are not entitled to a refund of tuition and/or fees paid by third parties; such will be refunded/returned to the agency.

General Requirements: Federal Student Aid funds are awarded to a student under the assumption that the student will attend the institution for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of Title IV funds that the student was originally scheduled to receive.

If a recipient of Federal Student Aid loan withdraws from school after beginning attendance, the amount of Federal Student Aid loan assistance earned by the student must be determined. If the amount disbursed to the student is less than the amount the student earned, and for which the student is otherwise eligible, he or she is eligible to receive a post-withdrawal disbursement for the earned aid that was not received.

Definition of a Title IV Recipient: A recipient of loan assistance is a student who has actually received Title IV funds or has met the conditions that entitle the student to a late disbursement. If the student never began enrollment for the payment period or period of enrollment, the refund policy does not apply. Similarly, if a student began enrollment, but was not and could not have been disbursed Title IV funds prior to withdrawal, the student is not considered to have been a Title IV recipient and the requirements of this refund policy do not apply.

Funds to Include in the Calculation: To determine the amount of funds that have to be returned to the Federal Government, the web-based R2T4 program is used. A calculation of earned/unearned Title IV program assistance loan funds that were disbursed or could have been disbursed to a student based on the length of enrollment for the academic year. This includes the Federal Direct Unsubsidized and Grad PLUS Loan Programs.

Title IV Aid Disbursement: A student's Title IV funds are disbursed when the school credits a student's account with the funds or pays a student directly with Title IV funds received from the William D. Ford Federal Direct Loan Program. A student's aid is counted as disbursed for the calculation if it is disbursed as of the date of the institution's determination that the student withdrew.

Percentage of Title IV Aid Earned: The withdrawal date is used to determine the point in time that the student is considered to have withdrawn so the percentage of the enrollment period completed by the student can be determined. The percentage of Title IV Aid earned is equal to the percentage of the enrollment period completed. If the day the student withdrew occurs on or before the student completed 60% of the enrollment period for which the assistance was awarded, the percentage earned is equal to the percentage of the enrollment period that was completed, and the Return to Title IV (R2T4) Calculation is performed. If the day the student withdrew occurs after the student has completed more than 60% of the enrollment period, the percentage earned is 100%, and no R2T4 Calculation is needed.

Determining a Student's Withdrawal Date at a School Not Required to Take Attendance

The chart below lists the withdrawal date for the various types of withdrawals, as well as, the date of the institution's determination that the student withdrew for each type of withdrawal.

	Circumstance	Student's Withdrawal Date*	Date of the Institution's Determination that the Student has Withdrawn
Official Notification	The student begins their respective school's withdrawal process, or the student otherwise provides official notification to the school of their intent to withdraw.	• The date the student begins the school's withdrawal process, or • The date that the student otherwise provides the notification. • (If both circumstances occur, use the earlier withdrawal date.)	The student's withdrawal date, or the date of notification, whichever is later
Official Notification Not Provided	Official notification not provided by the student because of circumstances beyond the student's control. All other instances where student withdraws without providing official notification.	• The date that the school determines is related to the circumstance beyond the student's control. • The midpoint of the payment period or period of enrollment, as applicable.	The date that the school becomes aware that the student has ceased attendance. **
Withdrawal Type	Circumstance	Student's Withdrawal Date*	Date of the Institution's Determination that the Student has Withdrawn
Leave of Absence Related	The students does not return from an 'approved' leave of absence, or The student takes an 'unapproved' leave of absence.	• The date that the student began the leave of absence.	The earliest of the dates of the end of the leave of absence or the date the student notifies the school he or she will not be returning to that school. (In the case of an unapproved absence, the date that the student began the leave of absence.)
Withdrawal After Rescission of Official Notification	The student withdraws after rescinding a previous official notification of withdrawal.	The student's original withdrawal date from the previous official notification.	The date the school becomes aware that the student did not, or will not, complete the program period or period of enrollment.

* In place of the dates listed, a school may always use as a student's withdrawal date the student's last date of attendance at an academically related activity, if the school documents that the activity is academically related, and that the student attended the activity.

****** For a student who withdraws without providing notification to the school, the school must determine the withdrawal date no later than 30 days after the end of the earlier of the (1) payment period or period of enrollment (as appropriate), (2) academic year, or (3) education program.

Title IV Aid to be Returned: If a student receives more Federal Student Aid than the amount earned, MMC, the student, or both must return the unearned funds in a specific order. The amount of Federal Student Aid to be returned is determined by subtracting the amount of earned Title IV aid from the amount of the Title IV aid that was disbursed to the student (not including aid that could have been disbursed).

Amount of Unearned Title IV Aid Due from School: When a return of Title IV funds is due, the school and the student both may have a responsibility for returning funds. Federal funds that are not the responsibility of the school to return must be returned by the student. Although this requirement references returning loan funds, a school is not required to return its share before the student. Rather, it is the R2T4 calculation of the amount of assistance the school is responsible for returning to the Title IV accounts that must be calculated first. The student's repayment obligation is determined after the school's share is calculated. The school must return the lesser of: The amount of Title IV funds that the student did not earn; or the amount of institutional charges that the student incurred for the payment period or period of enrollment multiplied by the percentage of funds that was not earned.

Return of Funds by the School: A school must return Title IV funds to the program from which the student received aid during the payment period or period of enrollment as applicable, in the following order, up to the net amount disbursed from each source:

- Federal Unsubsidized Stafford Loans
- Federal Subsidized Stafford Loans (Graduate/Professional students are no longer eligible for Subsidized Loans)
- Federal Perkins Loans (2016-2017 was the last year that Graduate/Professional students could receive these funds)
- Federal Graduate Plus Loans

NOTE: A school has 45 days from the date the institution determines that the student withdrew to return all unearned funds for which it is responsible.

Return of Funds by the Student

The student returns funds to loan programs in accordance with the terms of the loan. In other words, the student will repay any unearned loan funds in the same manner that he or she will be repaying earned loan funds.

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. Students should expect and receive courteous and helpful assistance from staff and innovative instruction and research methods from the faculty. If a student breaches the moral and ethical standards of the institution, Meharry Medical College reserves the right to dismiss the student.

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.
- Use of the name "Meharry Medical College" or any derivative thereof, as the purchaser of goods or services ordered or bought by students is expressly prohibited. Students may use the name "Meharry Medical College" and the address of the institution as the mailing/shipping address for packages and letters.
- 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 Life 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 at <https://home.mmc.edu/student-affairs/student-life/handbooks-policies/>.

Attendance

The attendance policy recognizes the responsibilities of the student, the faculty and the administration of the School. The attendance policy is established by each school, managed by the course director for each course, and published in each course syllabus. Students who are absent from classes must work with the faculty to complete course work and make up missed clinic sessions. Excessive absences from required

courses may result in loss of grade up to and including failing the course.

Continuous Enrollment

All students must be in an official enrollment status, i.e. registered and enrolled or on an official leave of absence (see Leave of Absence Policy) to be considered a student at Meharry Medical College. Please note, students on a Leave of Absence are not permitted to sit for any Boards (i.e. USMLE, NBDE).

Any student not enrolled for two consecutive semesters and not on an official leave of absence will be administratively withdrawn. A warning letter will be sent during the first semester of non-enrollment.

Any student administratively withdrawn must petition their respective School in writing for reinstatement to an active status.

Any student not enrolled for more than three semesters must reapply for admission through the normal admissions process under the current admissions requirements and standards. Credit for coursework already completed will not be automatically guaranteed.

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. All leaves of absence must be requested in writing and addressed to the dean for academic affairs. In most cases, a leave of absence cannot extend past one calendar year. A request for an extension of the leave will be at the discretion of the School's dean. A leave of absence from the College is given only to students who are in good academic standing. During a leave of absence, the student is not enrolled and therefore not allowed to sit for board examinations or participate in any academic coursework.

All requests for a return from a leave of absence must be in writing and received by the respective School dean before the expiration of the leave. Additional information about conditions and timelines for requesting and returning from a leave of absence is provided in each school's Academic Policies and Procedures Manual.

Involuntary Leave of Absence

Meharry may place a student on an involuntary leave of absence from their academic program when the student: (1) poses a direct threat to health and safety of self or others; and (2) is not able or not willing to take a voluntary leave of absence. This form of leave may not be used in lieu of disciplinary actions to address any violations of the College's rules, regulations, policies, or practices. A student who is placed on an involuntary leave while on academic and/or disciplinary status will return on that same status.

When an involuntary leave is under consideration, the Dean or the Dean's designee will notify the Senior Vice President of Student Affairs, the Director of the Student Health Center (if relevant); the Director of Counseling Services (if relevant); the Director of Student Housing, Campus Safety and Security (if relevant) and The Office of the Registrar (if relevant). A psychological and/or medical evaluation (at no cost to the student) may be required and completed by the Director of Counseling Services if the conduct giving rise to the involuntary leave was caused by a medical or psychological condition. The student will be asked to provide relevant medical and/or psychological information from his or her health care provider.

Following the review of a completed psychological and/or medical evaluation (if relevant) and upon consideration of recommendations made by any of the College's offices identified above, a decision will be reached by the Dean or the Dean's designee. The student will be informed in writing of the decision and the terms and conditions of the leave and re-enrollment.

If a student is placed on an involuntary leave, the student's Identification card must be returned to the College and access to his or her e-mail computer account may be suspended at the discretion of the Dean or the Dean's designee. The student must be off the campus during the approved period of leave. Campus Safety and Security will be notified of the student's involuntary leave and will take appropriate steps to limit access of the student during the approved period of the involuntary leave.

The relevant academic program, academic department, or school will be responsible for notifying the appropriate College's offices, administrators, faculty advisors, and instructors of the involuntary leave. The notation "leave of absence" will be entered on the student's transcript.

Appeal of an Involuntary Leave Decision: A student who is placed on an involuntary leave may appeal the decision to the Executive Vice President (or designee) within ten (10) ^{11 SEP}business days (excluding weekends and federal and state holidays) of the decision. The appeal should be made in writing and should set forth the basis for the appeal. The Executive Vice President and Provost shall review the record and any additional information submitted by the student. The Executive Vice President and Provost has ten (10) business days from receipt of the appeal (excluding weekends and federal and state holidays) to affirm or reverse the decision, which is then considered final. The Executive Vice President and Provost may extend the time limits set forth above as necessary.

Duration of Leave: The duration of the leave will be no less than one full academic semester or an equivalent four- month period excluding the semester in which the student is required to leave to a maximum of two academic semesters or the equivalent in months (8 months). An extension or reduction of the leave period may be granted for good cause. Students cannot be reinstated for a particular semester after the registration deadline for that semester has passed.

Return from an Involuntary Leave/Re-enrollment: One month prior to the first day of classes of the semester in which the student seeks to return, the student must notify the Dean (or the Dean's designee) of his or her school, in writing of the intention to return/re-enroll at the conclusion of the leave period. The student also must notify the Campus Housing if seeking on-campus housing upon return. If the conduct giving rise to the involuntary leave was caused by a psychological or medical condition, the student must also notify either the Director of Counseling Services (or his or her designee) or the Director of the Student Health Center (or his or her designee) to schedule an assessment interview, depending on whether the involuntary leave was due to a medical or psychological condition.

If the conduct giving rise to the involuntary leave was caused by a psychological or medical condition, the student must have his or her health care provider complete a "Certificate of Readiness to Return" form and be independently assessed by the Director of Counseling Services (or his or her designee), and/or the Director of the Student Health (or his or her designee) regarding the student's fitness to return/re-enroll. Upon request, the student will authorize his/her health care provider to provide Meharry with additional medical or psychological information relevant to assessing the student's fitness to return/re-enroll.

Following the review of the re-enrollment request and upon consideration of recommendations made by any of the relevant College's offices and information provided by the student's health care provider, a decision will be reached by the Dean or the Dean's designee regarding whether the student may return/re-enroll in his or her academic program and the terms and conditions of such a return. The Dean or Dean's designee will notify the appropriate offices and administrators, including the Campus Safety and Security, as to whether the student is permitted to return.

Appeal of Decision Denying Re-enrollment: A student may appeal a decision denying re-enrollment to the Executive Vice President and Provost (or the designee) in writing within ten (10) business days (excluding weekends and federal and state holidays) of receiving the decision. The Executive Vice President and Provost shall review the record and any additional information submitted by the student and render a decision within ten (10) business days (excluding weekends and federal and state holidays) of receiving the appeal. The Executive Vice President and Provost's decision shall be final.

Non-Academic Disciplinary Action

Student Disciplinary Committee

Appeals involving non-academic violations of the College's Code of Professional Conduct and Honor Code must be transmitted in writing to the College's Student Disciplinary Committee (SDC). The SDC is appointed by the President and is comprised of seven (7) members of the Meharry Medical College community, two (2) faculty members from each school and one (1) student. Members are appointed for a two-year term with the exception of the student member who is appointed for one-year.

The College makes every effort to protect the privacy of the individual(s) involved in disciplinary actions. The location and time of the SDC hearings are not made public and each member is required to sign a confidentiality agreement, which requires that the names of individuals appearing at the committee hearings not be disclosed.

Reporting Ethical and Professional Complaints: Unprofessional conduct and allegations of unethical standards should be reported to the Senior Vice President for Student Affairs. Allegations of violation of the College policies are accepted for consideration when the apparent infractions are observed on college property or other locations where the college provides services or has approved of the activity. Infractions of federal, state or local laws occurring off campus shall be the concern of the civil authorities except when such actions: (1) directly affect health, safety, or security; (2) affect the college's pursuit of its educational purposes; or (3) occur as a direct result of a college connected disruption. Any employee, student or faculty may report an allegation of unprofessional and unethical conduct. Each allegation should be in writing and describe with as much specificity as possible (e.g., dates, names, locations, occurrences), the factual events that constitute the alleged violation. If specific information is unknown, the person making the allegation should supplement as appropriate. Every effort should be made to resolve the situation at that level. If the situation cannot be resolved at Senior Vice President of Student Affairs' level an appeal should be handled by members of the SDC. Only sanctions that result in suspension or expulsion are appealable.

Disciplinary Guidelines: Student discipline may take a variety of forms, including, but not limited to, counseling, oral reprimand, written reprimand, probation, restitution, suspension, and expulsion (with or without the possibility of readmission).

- A. **Investigation and Report:** Once the SDC has received an allegation the Chair will work closely with the Office of General Counsel and any appropriate body or person to investigate the allegation. An investigation includes gathering and reviewing pertinent documents, interviewing necessary witnesses, and interviewing the student (if he or she agrees to be interviewed).

Although institutional investigations and hearings are not considered legal hearings, a lawyer can accompany a student during the interview; however, the interview will be conducted only if a lawyer from the College is also present.

A summary of the facts and evidence supporting the suspected violation of the Code will be submitted to the Chair for review. The Office of General Counsel is available for consultation at any time on any student disciplinary case, as appropriate. If the Chair determines the misconduct is within the range of possible sanctions for the alleged offenses, then he or she will ensure that the case is coordinated with the Office of General Counsel at an appropriate time.

B. **Notification to Student:** Once the investigation is completed and a report of findings is submitted to the Chair of the SDC, the Chair will provide the student written notification of the following:

1. The violation(s) to be considered.
2. A summary of the evidence generally indicating that such violation has occurred.
3. The range of disciplinary sanctions that could result.
4. The student's opportunity to exercise any and all of the following rights, which will be waived if not exercised within the periods of time specified:
 - a. A right to respond in writing within ten (10) days to explain anything that is factually erroneous about the allegation and/or that there has been no violation;
 - b. A right to respond in writing within ten (10) days to explain why a particular disciplinary sanction would be too severe even though a violation has occurred;
 - c. A right to submit within ten (10) days all documentary evidence (including statement/affidavits of witnesses, letters of character references, etc.) that support any of the student's positions; and
 - d. A right to submit within ten (10) days a written demand for an oral hearing.

Upon lapse of the above ten (10) day period and/or receipt of the written submissions, the SDC will convene to review the evidence and determine the appropriate disciplinary action or determine to dismiss the case.

If the student demands a hearing, then the Chair of the SDC will provide a certified letter of notification with notice of the following:

1. The time of the hearing (no later than five (5) business days from the date of notification).
2. The location of the hearing.
3. The violation(s) to be considered.
4. The range of disciplinary sanctions that could result.
5. The names of witnesses expected to be called by the SDC.
6. The written or documentary evidence that the SDC will consider.
7. That the student may testify at the hearing and present evidence at the hearing through the testimony of witnesses, provided that he or she provides written notice of the identities of these witnesses to the Chair of the SDC at least two (2) days before the scheduled hearing.
8. That the student may submit further written or documentary evidence for the consideration of the SDC, provided documentation is submitted at least two (2) days before the scheduled hearing.
9. The student may be accompanied by an attorney/advisor provided all parties understand the attorney/advisor will not be allowed to address the SDC. A representative from the Office of the General Counsel will also be present.
10. That, at the conclusion of the hearing, the SDC will deliberate privately and, by majority vote, make its decision on the issues of whether a violation has occurred and whether a particular disciplinary sanction should be imposed.

- C. ***Decision by the Student Disciplinary Committee:*** After the hearing, the SDC will submit a letter within two (2) business days, via certified mail and email, to the student informing them of the decision. If the student wishes to appeal the decision, they have 72 hours to submit a written appeal to the EVP/Provost of the College. Only sanctions that result in suspension or expulsion are appealable.
- D. ***Appeal to the President:*** If the student appeals the SDC's decision to the EVP/Provost will review the entire case file (including all materials submitted by the student in support of his or her appeal), consult with others as appropriate, and provide written notice to the student of final disposition of the case.

Procedures for Review and Appeal of Academic Dismissal Actions

A student's academic status is determined by the Student Evaluation and Promotion Committee (SEPC) in each school. 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, which consists of members of the teaching faculty and is appointed by the Dean. The Dean of the school concerned determines the number and mix of each SEPC. The appropriate SEPC recommends an academic status for each enrolled student based on the School's academic policies.

Procedures for review and appeal of a recommendation for dismissal based on academic performance are established by each school and are outlined in the school's Academic Policies and Procedures Manual.

Requirements for a Degree

A degree from Meharry Medical College's School of Medicine, School of Dentistry, or School of Graduate Studies will be conferred upon those candidates who have met the following requirements:

1. Regular attendance for the prescribed period of academic years of instruction based on degree conferred. For candidates in the School of Medicine and School of Dentistry, a completion of the prescribed period of four academic years or for the prescribed period of five academic years of instruction when permitted by the respective school's Student Evaluation and Promotion Committee (SEPC).
2. Satisfactory completion of curricular requirements for each year of study.
3. Compliance with high standards of professional and moral conduct and adherence to all College rules and codes of conduct.
4. Payment of all financial obligations.
5. Return of all loaned equipment to the respective schools.
6. Successful completion of **all** required national board examinations.
7. Completion of all requirements within five academic years (if matriculation within a traditional four year program) after first enrollment in the program.
 - a. The College's Executive Academic Committee must approve any repetition of the academic year or continuation into the trimester due to academic reason, which will cause the student to matriculate for more than five years.
 - b. If repetition of the academic year or continuation into a succeeding trimester extends past five years, and is due to disciplinary reasons, the Dean of the respective school or the appointed designee may waive the five-year rule.
8. Only students who have completed all of the above requirements by April 30 will receive a diploma with the published commencement date. Those completing all requirements after April 30 will receive a diploma with the date of June 30, October 31, or December 31.

Student Code of Professional Conduct

Purpose: The Student Code of Professional Conduct of Meharry Medical College is promulgated so that student academic affairs are conducted under the highest standards of individual responsibility. The Student Code of Professional Conduct promotes personal honor and integrity in the best traditions of the health

sciences professions. The Professional Code of Conduct promotes academic honesty and integrity in the classroom, laboratory, clinics, and other academic endeavors. The Professional Code of Conduct requires students to uphold its principles of fairness, professionalism, and ethical behavior; and it also provides procedures to adjudicate alleged violations. By their pledge to subscribe to and uphold this Professional Code of Conduct, Meharry Medical College students assume the responsibility for the implementation of the Professional Code of Conduct, and their own academic and professional honesty and integrity. Students are required to sign the Professional Code of Conduct pledge at Meharry Medical College. Faculty and staff also have a responsibility to participate in the implementation, enforcement, and application of the Professional Code of Conduct.

Accountability: By direction of the President, the Office of the General Counsel shall ensure compliance with this policy.

Definitions

1. Code of professional conduct” is a series of principles and rules that govern professional interactions. Such principles include both obligatory and desirable components. Obligatory behaviors refer to necessary professional behaviors, which are required by ethical principles, and which form the foundation of professional practice, teaching, and learning. Desirable professional behaviors refer to components which enhance professional excellence. Honesty is a central element of each component.
2. “Exoneration” is committee clearance of alleged violations.
3. “Suspension” is defined as temporary exclusion from academic, research and/or clinical activities.
4. “Probation” is a period of time which student must remain free of violations prior to reinstatement or removal of restricting conditions.
5. “Reprimand” means written censure for specified college regulatory violations.
6. “Restriction of Privilege” is defined as loss or diminution of academic, research and/or clinical activities for a prescribed period of time.

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:

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.

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.

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.

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.

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.

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.

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:

- submission of such conduct is made explicitly or implicitly the terms or condition of an individual's employment or academic standing;
- submission to or rejection of such conduct by an individual is used as a basis for employment or educational decision affecting an individual; or
- 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 General Counsel for assuring implementation of the policy. The complete policy on sexual harassment is presented in The College Policy Manual and the Academic Policy and Procedure Manual for each school.

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 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.

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: Prior to registration, all students are required to submit hard copy immunization records for the following:

Required Immunizations and Quantitative Serologic Titers:

- Hepatitis B vaccinations: documented series of 3 vaccines and Hepatitis B surface antibody quantitative serologic titer
- MMR (measles, mumps, rubella): documented series of two doses and quantitative serologic titers
- Varicella: documented series of two doses and quantitative serologic titer or documented date of disease and quantitative serologic titer.
- Tetanus/Diphtheria/Pertussis: documentation of Tdap vaccine within the last 5 years.
- Polio: documentation of last immunization
- Tuberculosis Screening: within the last 6 months: PPD or IGRA result or documentation of previous positive PPD, subsequent treatment and most recent chest x-ray report (within the last 6 months)

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.

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 school's Academic Policies and Procedures Manual and in the section for each school in this document (Academic Catalog).

Withdrawal from the College

A student may withdraw from Meharry Medical College after completing the official withdrawal form, properly executed with the appropriate signatures, and submitting the form to the Office of the Registrar. Grades for completed courses will be recorded on the official record. If the student desires to return to Meharry Medical College, the formal readmissions application process must be completed.

Each school may have additional policies and procedures for withdrawing from an academic program in conjunction with withdrawing from the College. Additional information regarding withdrawing from a degree program is found in the respective section of this document and in the Academic Policies and Procedures Manual for each school.

School of Dentistry

Administration

Cherae Farmer, D.D.S., M.S.P.H., M.B.A., F.A.C.D., F.I.C.D., Dean

James Tyus, D.D.S., Vice Dean

James Tyus, D.D.S., Interim Dean of Academic Affairs

Kerin L. Burdette, DDS, MPH, FAAPD, Dean. Office of Student Affairs

Deborah Cole, M.B.A. G.G., D.M., Associate Dean of Finance and Business

Pandu Gangula, Ph.D., Associate Dean of Research

Julie Gray, D.D.S., M.A., Associate Dean of Community-Based Education

Machelle Thompson, R.D.H., M.S.P.H., Associate Dean of Compliance

David Mott, D.M.D., M.S., Associate Dean of Clinical Affairs

Anita Sykes-Smith, D.D.S., M.B.A., F.A.C.D., Assistant Dean of Patient Services

Department Chairpersons

James Cade, D.D.S., Oral Diagnostic Sciences and Research

Kimberley L. Perkins-Davis, D.D.S., M.B.A., F.I.C.D., Oral & Maxillofacial Surgery

Sandra G. Harris, D.D.S., F.A.C.D., Orthodontics

Shana Warren-Byers, D.D.S Interim Pediatric Dentistry

David Mott, D.M.D., M.S., Periodontics

Angela Graves, D.D.S., M.S., Restorative Dentistry

Ashley Harrison, D.D.S., Interim Endodontics

David Miller, D.D.S., Dental Public Health

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 136 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, Vision, and Core Values of the School of Dentistry

Mission

True to its heritage, the Meharry Medical College School of Dentistry exists as a global academic health Center of Excellence that promotes improving the oral health and overall health care through transformative, collaborative, educational, and service models, the provision of excellent compassionate health care and innovative research.

Vision

To identify, mentor, train, and educate the next generation of dental practitioners, faculty, and researchers, placing special emphasis on African Americans and other people of color as well as others from areas of limited access, who will lead our communities nationally and internationally in the advancement of oral health care. The School of Dentistry will achieve this vision through:

- Students, faculty, and staff
- Collaborative research
- Interprofessional collaboration
- Integrated curriculum
- Patient-centered clinical enterprise

Core Values

- **Integrity** – professionalism and ethics in all aspects of life.
- **Excellence** – producing the best at all times.
- **Empathy** – compassionate service for underserved and health care disparities.
- **Cultural Intelligence** – embracing and understanding cultural differences.
- **Leadership** – mentoring and encouraging students to pursue leadership opportunities.

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 differing backgrounds to include a variety of socio-economic status.

The dental school curriculum is dynamic and is regularly monitored and modified in response to contemporary trends in dental education, research, 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 degree, which serves as an alternative for admission for some students. 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 (DAT) scores for acceptance into the dental education program. The program consists of a structured academic enhancement curriculum for one year to increase the student's 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.

The SOD also has an International Dentist Track Program designed for foreign-trained dentists to earn a Doctor of Dental Surgery (DDS) degree in the United States. This program begins with a six-week individualized training and assessment module centered on comprehensive pre-clinical dentistry and its biomedical applications. After the international student has successfully navigated the six-week curriculum, the student must complete the two-year clinical program to graduate. During the final year of this International Track, the student must complete the Final Competency Examination (FCE) course.

The School also sponsors three post-doctoral programs:

1. The **General Practice Residency (GPR)** program is a one-year, accredited program that is affiliated with the Nashville General Hospital, Nashville Veterans Affairs Hospital, and Murfreesboro Veterans Affairs Hospital.
2. The **Oral and Maxillofacial Residency (OMFS)** 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, Nashville General Hospital, Nashville Veterans Affairs Hospital, Mission Memorial Hospital, Monroe Carell, Jr Children's Hospital at Vanderbilt University, University of Tennessee Knoxville Medical Center, Blanchfield Army Community Hospital at Fort Campbell, and Marvel Cosmetic Surgery Center.
3. The **Pediatric Dentistry Residency (PDR)** program is a two-year accredited program that trains residents in the full scope of pediatric dentistry. Resident training is both an inpatient and outpatient service of the School of Dentistry, Nashville General Hospital, Meharry Medical College Pediatric Medicine, and Vanderbilt University Medical Center.

The School of Dentistry is a member of the American Dental Education Association. The pre-doctoral dental education, GPR, PDR, and the OMFS programs are accredited by the American Dental Association's Commission on Dental Accreditation (CODA).

Admissions Procedures

The School of Dentistry participates in the Associated American Dental Schools Application Service (AADSAS) sponsored by the American Dental Education Association (ADEA). The deadline for all applications must be completed by December 15th of the year prior to anticipated matriculation. Applications for regular admission should be submitted through the AADSAS process. 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 the materials needed to conduct a preliminary evaluation. A supplemental application 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. Once

accepted, students must pay a non-refundable enrollment deposit (time limitations) of \$800 to reserve a seat for admission into the first-year dental class.

Persons desiring to submit an application for regular admissions must apply through the AADSAS, 655 K Street, N.W, Suite 800, Washington, D.C. 20001; 1-617-612-2045 (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. It is the applicant's responsibility to have a report of their 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.

Persons desiring admission to the International Dentist Program must apply through the ADEA Centralized Application for Advanced Placement for International Dentists (ADEA CAAPID). Applicant must have been from a non-US dental school and passed the National Board Dental Examination (NBDE) Part 1 and Part 2 or the Integrated National Board Dental Examination (INBDE) to be eligible for admission.

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.

Admissions 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 First Year (D1) 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 from a US or Canadian accredited college or university
2. REQUIRED PREREQUISITES:
 - 6 semester hours (9 quarter hours): English Grammar and Composition or Writing Intensive Course Equivalent
 - 3 semester hours (5 quarter hours): Calculus or Statistics

- 8 semester hours (12 quarter hours): General Physics with Lab
 - 8 semester hours (12 quarter hours): General Biology/ Zoology with Labs
 - 8 semester hours (12 quarter hours): General or Inorganic Chemistry with Labs
 - 8 semester hours (12 quarter hours): Organic Chemistry with Labs
 - 3 semester hours (5 quarter hours): Biochemistry
3. Additional strongly recommended courses: Anatomy/Physiology, Microbiology, Histology/Cell Biology and Statistics. Other recommended courses include Genetics, Molecular Biology, and Pharmacology
 4. Online courses “are not accepted” towards required prerequisites.
 5. Although not a requirement for admission, applicants who have completed public health courses are better equipped to navigate the public health certificate program that is included in the dental school curriculum.
 6. Students with “conditions” in college courses are not accepted. All applicants applying for admission must also have completed the required course prerequisites within the last five years. Pass/Fail courses are not accepted unless it is the policy of the institution or college attended. Applicants are encouraged to have a minimum cumulative GPA of 3.0 and a Biology, Chemistry and Physics GPA of 2.5. The applicant must have completed the prerequisite courses with a grade of “C” or better. Advanced Placement (AP) credits are accepted provided they are accepted by the undergraduate institution. Applicants who have earned AP credit for pre-requisite courses are recommended to take additional advanced-level courses.
 7. 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, and three favorable recommendations.

Three letters of recommendation from an advisor, mentor, or professor must be submitted to [AADSAS](#) by the December 15th deadline of the year prior to matriculation. Two of the letters should be from science professors. A recommendation letter will be accepted from institutions that utilize an advisory committee in place of the two recommendations from science professors. The letters of recommendation serve to provide the Admissions Committee with insight into the applicant's character, personality and learning ability.

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 Services for Students section 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 D1 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 the 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.

Accelerated Pathway Program

The Meharry Medical College/Tennessee State University (TSU) Dr. Levi Watkins, Jr. Medical/Dental Accelerated Pathway Program: TSU and Meharry have a long-standing relationship in preparing minority students for professional careers. Students selected for this program will spend three years of study at the College of Life and Physical Sciences at Tennessee State University. The Bachelor of Science (B.S.) degree in Biology or Chemistry will be conferred upon successful completion of the undergraduate degree requirements at Tennessee State University. The Doctor of Dental Surgery (D.D.S.) will be conferred after admission to and successful completion of the dental program at Meharry Medical College.

Admission to Advanced Standing

The MMCSOD admits students with advanced standing only if they are transferring from another U.S. or Canadian accredited dental school. Potential predoctoral students seeking advanced standing must apply through the regular admissions process through AADSAS. International dentists must apply through the ADEA Centralized Application for Advanced Placement for International Dentists (ADEA CAAPID).

Transfer applicants will be considered for admission only after the D2 year of dental school. The transfer process will take a significant amount of time, and the applicant should submit the request for transfer admission to the Office of Admissions and Recruitment along with a \$65.00 non-refundable application fee no later than December 1st of the year prior to desired matriculation to the MMCSOD. If the transfer student is accepted, the student must pay a non-refundable enrollment deposit (time limitations) of \$800 to reserve a seat for admission into the class.

The following policies apply to dental students seeking to transfer to Meharry:

- 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 is submitted from the Admissions Committee to the Dean. The Dean forwards the name (s) to the Office of Admissions and Recruitment with the final decision.
- A transfer student can be accepted only at the end of his/her D2 year in dental school and must be in good academic standing. A “statement of good standing” must be provided by the Dean or his/her designee of the dental school from which the student wishes to transfer.

After a letter of good standing is received, the following must be achieved:

- Integrated Comprehensive Examination prior to acceptance. This exam is designed to assess the applicant’s understanding of Foundational Knowledge of INBDE concepts, critical thinking skills, and fundamental didactic pre-clinical knowledge. Transfer applicants must communicate with the Office of Academic Affairs to coordinate challenging the MMCSOD Integrated Comprehensive Examination.
- The Academic Dean 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. Due to the unique nature of the dental curricula, each candidate is assessed on a case-by-case basis. In the event that courses are not equivalent, the student will be required to successfully complete the School of Dentistry’s D2 year curriculum to achieve advanced standing.
- No courses will be accepted with a grade of “D” or “F” or “N” or “I.”
- Prior to matriculation, the transfer student must submit copies of immunization records, official transcripts, and all necessary documents to the Meharry Medical College Office of Admissions and Recruitment.
- The transfer student must be evaluated by the preclinical course directors prior to entering into comprehensive patient care.

Credit for coursework that is not eligible for transfer toward a dental degree includes:

- Experiential learning
- Credit by examination
- Advanced placement
- Professional certificates
- Non-credit courses
- Audited courses
- Correspondence or extension courses
- Online courses

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 college roll are eligible for reconsideration only under extenuating circumstance

School of Dentistry Program

The School of Dentistry offers a four-year pre-doctoral program in general dentistry, which is designed to prepare the student 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 continuing education.

The first (D1) and second (D2) year curriculum is devoted primarily to classroom and laboratory instruction in the basic and pre-clinical dental sciences. The D3 and D4 years focus on further development of clinical skills under the supervision of the faculty in all areas of general dentistry. Emphasis in all years is placed on the concept of comprehensive patient care. The clinical curriculum includes on-campus clinics, hospital experiences, and rotations at nearby community health centers. There are also opportunities to engage in clinical practice and research in locations outside of Nashville.

Successful completion of the prescribed academic/clinical program and evidence of high ethical and moral behavior leads to the Doctor of Surgery (D.D.S.) degree. The School of Dentistry graduate programs in General Dentistry, Pediatric Dentistry, and Oral and Maxillofacial Surgery accept Meharry School of Dentistry graduates as well as graduates from other U.S. and Canadian dental schools.

The School of Dentistry reserves the right to 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, motivation and effort. It requires a cooperative effort between faculty and students toward the common goal of the student's attainment of the cognitive, psychomotor and affective skills necessary to practice dentistry.

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:

- To provide high-quality and contemporary instruction
- To provide high-quality clinical instruction, producing a competent dentist
- To provide a state-of-the-art physical facility for instruction
- To foster an interest in research development
- To provide mentorship to support students and junior faculty
- To provide student academic support services as needed on an individual basis

- To prepare the student to successfully challenge the Integrated National Board Dental Examination
- To 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 that 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: comprehensive patient care and specialty rotations. This broad-based approach enhances the environment in which students can deliver high-quality dental health care in a more humanistic manner. 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 into the patient's electronic records and signed by the student and the faculty person evaluating the procedure(s).

Research Mission and Vision

Education and Research are essential in the development and dissemination of new knowledge as an integral component of the purpose/mission, goals and objectives of the School of Dentistry. The Research mission of the School of Dentistry at Meharry Medical College is to bridge Basic Sciences and 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 positioning 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.

The research vision of the School of Dentistry (SOD) ensures research training is fully integrated within the academic programs by encouraging faculty and students to be fully engaged in these and similar research activities. In addition, special emphasis is placed on research initiatives that eliminate health disparities that disproportionately affect people of color and disadvantaged backgrounds.

Continuing Education Coursework

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 and Enrichment

Continuing Education courses are designed for general practitioners who are graduates of dental professional schools 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.

Post-Baccalaureate Program

The Meharry School of Dentistry no longer administers a Post-Baccalaureate Program. However, students who have applied to the D.D.S. program and have not been admitted may be invited to enroll in the Master of Health Science Program administered by the Meharry Medical College School of Graduate Studies.

Academic Regulations

Requirements to Qualify for the D.D.S. Degree

A degree from Meharry Medical College's School of Dentistry will be conferred upon those candidates who have met the following requirements:

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 advanced standing.)
2. Satisfactory completion of curricular requirements in preclinical and clinical areas for each year of study. This includes satisfactory completion of all didactic and clinical courses, all clinical experiences, practical examinations and all clinical competencies which include the final clinical competency examinations.

3. Compliance with high standards of professional and moral conduct and adherence with all College rules and codes of conduct.
4. Payment of all financial obligations.
5. Return of all loaned equipment, borrowed items, complete patient charts, empty lockers, completion of required evaluations, and submission of all clearance forms. (Please note that no dispensary checkouts are permitted once a student graduates. This also applies to those who are taking state licensure exams. If the exam is taken in the School of Dentistry, the facility fee will cover rental costs for equipment during the exam.)
6. Successful completion of **all** required national board examinations.
7. If applicable, completion of the full dual degree requirements.

The D.D.S. degree is awarded at the annual commencement exercise in May of each corresponding school year. Additional diploma dates are June 30th, October 31st, and December 31st. The table below displays the timeframe which corresponds to each diploma date:

Diploma Awarded	Award Timeframe
May Diploma	January 1 st to 30-days following Commencement
June 30th Diploma	31-Days following Commencement to June 30th
October 31st Diploma	July 1 st to October 31 st
December 31st Diploma	November 1 st to December 31 st

INBDE results are released to the Office of Academic Affairs 30-45 days after testing. Therefore, persons who did not receive the May, June or October diploma due to unsuccessful INBDE attempts must provide proof of successful test results; especially if the exam is taken in November or December of any given year. If results are received in the Office of Academic Affairs after December 31st, the diploma will be awarded in May of the following year.

Advising

Academic advising is provided through the Office of Academic Affairs. Personal advising assistance is provided through the Office of Student Affairs. Confidentiality is strictly maintained. Appointments are available upon request through both of these offices.

Licensure

The Final Competency Examinations (FCE) and Mock Clinical Examinations are designed to allow D4 students to demonstrate clinical competencies and time management. If the student has applied to participate in a state/regional board examination for licensure, the student will be required to complete the FCE 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 course coordinator. Grade Point Averages are based on the 4-point system. The symbols A (Excellent), B (Very Good), C (Satisfactory), P (pass), I (Incomplete) or F (Fail) appear on the official transcript and 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" grade 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) grades are used in the School. In addition to the letter grades of A, B, C, and F, "S" (Satisfactory) and "U" (Unsatisfactory) grades are used.

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 the course coordinator.

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

Evaluation and Student Performance

The Academic Dean along with the department chairs, establish the grading policies for examinations. Course coordinators will develop additional forms of student evaluation in the School courses. Grading policies for clinical experiences will be established by the Dean of Clinical Affairs in conjunction with department chairs. These policies are distributed as part of each course syllabus and clinic manual. At the

completion of each course, each student enrolled in the course is evaluated and awarded a letter grade. 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 Promotion 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 of Academic Affairs, the Assistant Dean of Student Affairs, and the Associate Dean for Clinical Affairs. There are two Committees: SEAPC D1/D2 and SEAPC D3/D4. The SEAPC meets on a regular basis, minimally at mid-semester, at the end of the semester, 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 CASA 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.

Satisfactory Academic Progress

In order to achieve good academic standing, a student 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 (fourteen (14) 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 14 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.

Unsatisfactory Academic Performance

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

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 on academic probation is not eligible to hold student leadership positions.

Academic Citations

All citations for outstanding performance in the School are issued by the Honors and Awards Committee, a branch of the Student Evaluation and Promotion Committee. Students cited for excellence who have performed at an outstanding level during the academic year are selected for citation by the appropriately involved faculty.

Dean's List

A student is eligible for the Dean's List if they perform at an exemplary level consistent with the achievement of a cumulative grade point average of 3.50 and above during an academic year.

Honor Graduates

The Student Evaluation and Promotion Committee recommends, to the dean, students for graduation with honors based on the student's scholastic record over the four-year academic program with a minimum cumulative grade point average of 3.50 or above will be recognized as graduating with honors. Honors, prizes, and awards are recommended by the Academic Evaluation, Honors, and Awards Committee. This committee processes awards based on stated criteria of the Donor, the Department, the Dental School, and the College.

Withdrawal from a Course

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. In instances such as this, a student must first obtain approval from the appropriate Instructor/Department Chairperson and the Academic Dean. Only at this point will the student's name be deleted from the official class roster. The form for withdrawal may be obtained from the Office of Admissions & Records.

Withdrawal from Meharry Medical College

A student may withdraw from the College after filing a completed withdrawal form with the Division of Student Affairs. The student's total performance in all courses will be evaluated at the time of the requested withdrawal in accordance with the College policies. Students may not withdraw from courses due to poor academic performance. Requests for withdrawals must be approved by the Dean of Student Affairs. Conditions for re-matriculation for a student who withdraws and is in good academic standing will be evaluated for re-admission by the admissions committee. A student who withdraws and is not in good academic standing will not be considered for re-admittance into the DDS program.

School of Dentistry Academic Calendar 2026-2027



SCHOOL OF DENTISTRY

Academic Year 2026-2027	
Friday, June 19, 2026	* Juneteenth Holiday
Monday, June 22-June 26, 2026	D1 (Class of 2030) & ID3 Orientation (Class of 2028)
Monday, June 29, 2026	MAP5 Classes Begin
Monday, June 29, 2026	ID-3 (Class of 2028) Comprehensive Pre-Clinical Dentistry Begins
Friday, July 3, 2026	* Observation of the 4th of July Holiday
Friday, July 24, 2026	MAP5 Classes End
Friday, August 7, 2026	ID-3 (Class of 2028) Comprehensive Pre-Clinical Dentistry Ends
Monday, August 3, 2026 - Friday, August 7, 2026	Online Assessments
Monday, August 10, 2026 to Tuesday, August 11, 2026	D1 - D2 Orientation
Monday, August 10, 2026 to Friday, August 14, 2026	D3, ID3, D4, ID4 Clinic Orientation
Wednesday, August 12, 2026	D1 and D2 Classes Resume
Friday, August 14, 2026	White Coat Ceremony
Monday, August 17, 2026	D3, ID-3, D4, and ID-4 Classes Resume and Clinics Open
Monday, September 7, 2026	Labor Day Holiday
Thursday, September 17, 2026	Constitution Day
Friday, October 2, 2026	Fred C. Fielder Memorial Heritage Lecture/Allen-Watson Memorial Heritage Lecture
Monday, October 5, 2026	Convocation
Monday, October 19, 2026 - Tuesday, October 20, 2026	Fall Break
Thursday, November 26, 2026 & Friday, November 27, 2026	Thanksgiving Holiday
Friday, December 11, 2026	Fall Semester Ends - Last Day of Classes and Clinics



SCHOOL OF DENTISTRY

Tuesday, December 15, 2026	All Grades Due in Workday/Registrar's Office
Thursday, December 17, 2026	D1 - ID4 SEAPC
Monday, January 4, 2027	Spring Semester Begins
Friday, January 8, 2027	OSHA Training/Faculty, Residents, Student, Staff Retreat
Monday, January 18, 2027	Rev. Dr. Martin Luther King Jr. Holiday
Thursday, January 21, 2027 & Friday, January 22, 2027	ADEX Mock Exam
Friday, February 5, 2027	Give Kids A Smile
TBD	Corabell Ball
Friday, February 19, 2027	Mobley-Singleton Lecture & Samuel O. Banka Heritage Lecture
Wednesday, March 3, 2027	Dental Match Day Reception
Saturday, March 6, 2027	Oral Health Day
Saturday, March 13, 2027 - Tuesday, March 16, 2027	ADEA Annual Session & Exhibition
Wednesday, March 10, 2027 - Sunday, March 14, 2027	Spring Break
Monday, March 15, 2027 - Friday, March 19, 2027	AADR/IADR
Friday, March 19, 2027 - Saturday, March 20, 2027	ADEX Examination
Thursday, March 25, 2027	Turpin Memorial Lecture
Friday, March 26, 2027	* Good Friday - Meharry Holiday



SCHOOL OF DENTISTRY

Friday, April 16, 2027 - Sunday, April 18, 2027	ADEX Examination
Tuesday, May 4, 2027	D4 Clinics End (Graduates)
Friday, May 7, 2027	D4 Grades due in Workday/Registrar's Office
Monday, May 10, 2027	D4 SEAPC (Senior Evaluations Only)
Monday, May 10, 2027-Friday, May 14, 2027	Clinics Closed for Commencement
Saturday, May 15, 2027	Commencement
Tuesday, May 18, 2027	Summer Clinic Session Begins
Thursday, May 20, 2027	D1-D3 Grades due in Workday/Registrar's Office
Thursday, May 27, 2027	D1-D3 SEAPC
Monday, May 31, 2027	* Memorial Day Holiday
Saturday, June 12, 2027 - Sunday, June 13, 2027	ADEX Examination
Friday, July 9, 2027	D1, D2, D3, ID-4 Spring Semester Ends
Thursday, July 15, 2027	D1-D4 Final SEAPC

A*Holiday - No Classes

****D4 students have until June 16, 2026, to complete all cases to be eligible to receive a May diploma. Any D4 student who anticipates not being complete with all degree requirements by Commencement must contact Student Financial Aid by May 11, 2026.**

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 2026-2027 academic year are as indicated below:

**Meharry Medical College
"Estimated" Budgets for Financial Aid - Dentistry
2026-27 Academic Year**

The following budgets embody what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Dentistry. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.								
COA Components	Monthly	First Year 12 months	Second Year 11 months	Third Year 11 months	Fourth Year 9 months	Post Year 4 4 months	Pediatric Dentistry I 12 months	Pediatric Dentistry II 12 months
Direct costs - paid to the College								
Tuition		\$58,984	\$58,984	\$58,984	\$58,984	\$29,492	\$40,000	\$40,000
Fees		\$18,248	\$19,556	\$10,574	\$10,604	\$5,924	\$9,208	\$8,948
Indirect costs - Living expenses								
Books & Supplies		\$1,216	\$1,114	\$1,114	\$912	\$0	\$0	\$0
Housing (incl. rent (-\$1,800), utilities, water, and rental insurance)	\$2,100	\$25,200	\$23,100	\$23,100	\$18,900	\$8,400	\$25,200	\$25,200
Food (Monthly food allowance)	\$550	\$6,600	\$6,050	\$6,050	\$4,950	\$2,200	\$6,600	\$6,600
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$6,900	\$5,578	\$5,578	\$4,564	\$2,300	\$6,900	\$6,900
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and internet usage)	\$600	\$7,200	\$6,600	\$6,600	\$5,400	\$2,400	\$7,200	\$7,200
Miscellaneous*		\$7,000	\$5,500	\$5,946	\$10,524	\$2,186	\$5,100	\$5,100
2026-27 COA TOTALS	\$3,825	\$131,348	\$126,482	\$117,946	\$114,838	\$52,902	\$100,208	\$99,948
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance						
	\$1,500	Laptop Allowance (1st years only)						
	\$3,400	Loan fees: DDS1 - DDS4				health insurance in 1/2		
	\$836	Loan fees for DSS						
	\$3,000	Loan fees for Pediatric Dentistry Certificate						
	\$600	Uniforms						
	\$1,046	INBDE - Integrated National Board Dental Exam with 90-days access to Q-Bank, included in 3rd year budget						
	\$3,786	ADEX Licensure Exam/OSCE fees- (includes all Board fees), included in 4th year budget						
	\$300	Licensure Application Fee - Tennessee, included in 4th year budget						
	\$938	DEA license application (\$888) and Prescription Monitoring Program Fee (\$50), included in 4th year						
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.								
PLEASE NOTE: credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.								
Tuition, student instrument, benchmark assessment and the health insurance fees will be split evenly between both fall and spring semesters.								
Due to OB3 changes, Class of 2030 admits will be eligible for three years of Grad PLUS borrowing. Year four must be funded through Federal Unsubsidized and/or private loans, if need								
	Subject To Change							
2026-27 50D FA Budgets								

Meharry Medical College
"Estimated" Budgets for the International Dental (ID) Program
2026-27 Academic Year

The following budget embodies what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Dentistry-International Program. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.			
COA Components	Monthly	ID3 12 month	ID4 10 months
Direct costs - paid to the College			
Tuition		\$119,146	\$119,146
Fees		\$30,612	\$9,614
Indirect costs - Living expenses			
Books & Supplies		\$1,216	\$1,014
Housing (incl. rent (~\$1,800), utilities, water, and renter's insurance)	\$2,100	\$25,200	\$21,000
Food (Monthly food allowance)	\$550	\$6,600	\$5,500
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$6,900	\$5,750
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$7,200	\$6,000
Miscellaneous*		\$8,100	\$11,886
2026-27 COA TOTALS	\$3,825	\$204,974	\$179,910
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance	
	\$600	Uniforms	
	\$3,786	ADEX Licensure Exam/OSCE fees- (includes all Board fees), included in year 2 budget	
	\$6,000	Loan fees	
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.			
PLEASE NOTE: credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.			
Tuition and the health insurance fee will be split evenly between both fall and spring semesters.			
Subject To Change			
Due to OB3 changes, Class of 2028 admits will be eligible for three years of Grad PLUS borrowing. Year four must be funded through Federal Unsubsidized and/or private loans, if needed.			
			2026-27 ID3/ID4 FA Budgets

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

Scholarships

A scholarship file is maintained in the School of Dentistry Office of Academic 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 Academic Evaluation, Honors, and Awards Committee for the School. This committee is composed of faculty and representatives from the Office of Academic Affairs. Friends of Meharry help enable the College to honor

these deserving students. The list and brief description of the awards are as follows:

Merit Scholarships: Merit Scholarships are awarded to incoming students who display exceptional scholastic ability as evidenced by their undergraduate cumulative grade point average and standardized admissions test scores. These scholarships are awarded for up to four years, based on the students maintaining high academic standards during their matriculation, and are awarded by the Admissions Committee.

Academic Achievement Scholarships: Academic achievement awards are earned by students based on scholastic achievement. These recognitions may consist of one-time departmental awards that honor top student performance within a specified time period, in their individual courses or for their work in research. Students named to the Dean's List, national honor societies, and other national recognition groups are also honored.

American Dental Association (ADA): The ADA awards a select number of Endowment Scholarships annually. There are two categories of awards: the underrepresented minority student and the general student population. The Awards Committee for the School selects students who will compete for these awards.

National Dental Association Foundation: These awards are granted to underrepresented minority dental students. Students submit applications to the NDAF Scholarship Committee. Recipients are selected by the NDAF Scholarship Committee.

Military Scholarships

Branches of the armed services offer various student scholarships. Obligatory service requirements are associated with these scholarship awards. The individual program can provide additional information. Telephone numbers for these programs are listed as follows:

Military Branch	Contact Information
National Health Service Corps	(800) 638-0824
Commissioned Officer Student Training and Extern Program	(800) 221-9393
Army National Guard	(615) 355-3937
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: Convocation awards are presented to students at various levels for outstanding didactic and clinical performance. Students are selected by the Academic Evaluation, Honors, and Awards Committee (AEHAC) based on criteria of the donor and procedures and policies established by the School and College.

Commencement Awards: Commencement awards are presented to graduating senior students for outstanding didactic and clinical performance. Students are selected by the (AEHAC) 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.

1. **The Heritage Lecture:** Throughout the courses of each academic year, the School sponsors special programs and lectures to honor persons who have made significant contributions to the School and the College. These lectures are considered as part of the continuing education and lifelong learning series. These programs provide opportunities to invite outstanding alumni and non-alumni academicians and clinicians to the School and to the College to present lectures in areas of contemporary interest 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. Student attendance is mandatory, unless otherwise stated.
2. **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).
3. **Fred C. Fielder Memorial Heritage Lecture:** This lecture and program honors Dr. Fred C. Fielder, former Dean of the School of Dentistry and Professor of Restorative Dentistry. Dr. Fielder retired from Meharry in 1998 as Dean Emeritus. (Inaugurated 2020).
4. **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).
5. **The Samuel O. Banks, Jr. Lecture:** This annual lecture and program honors Dr. S. O. Banks Jr., professor in the Department of Oral and Maxillofacial Surgery. Dr. Banks was the first Oral Surgery resident at the Meharry-Hubbard Hospital where he received his training under the late Matthew P. Walker, MD. He was the second African-American in the United States to receive board certification in Oral Surgery and is remembered by his students and colleagues as an outstanding educator, clinician, and chief administrator. (inaugurated 1988).
6. **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 African American Dean of the School of Dentistry. This celebration is co-sponsored by 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.

7. **Occupational Safety and Health Administration (OSHA):** This seminar is required for all students at each level of the academic program (D1, D2, D3, and D4). Students, faculty and clinical staff receive training in the management and prevention of occupational hazards. Students will learn how to prevent needle sticks and how to respond if a needle stick occurs. Students will know how to properly dispose of hazardous wastes and will be able to identify improper disposal of hazardous wastes.

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

Course Descriptions

BIOMEDICAL SCIENCES BASIC SCIENCES

ASDD 310-01 MAPS (Mini-Academic Program for Success) – This D1 course is the first course offered to incoming D1 students and provides students with early exposure to the major concepts found within the areas of biochemistry, microbiology, dental anatomy, and clinical decision making. **(7 credit hours)**

ASDD 305-01 Biomedical Integration & Critical Thinking I – This D1 course integrates the biomedical sciences with the clinical sciences. Case based scenarios are used that require students to correlate the various connections between the foundational biomedical sciences and clinical practice. Additional content is added each semester as the students gain additional knowledge. **(1 credit hour)**

ASDD 405-01 Biomedical Integration & Critical Thinking II – This course is offered to the D2 class and also integrates the biomedical sciences with clinical sciences. Case-based scenarios are again used, with more content being added from the clinical sciences as they gain information from the pre-clinical courses. Behavioral sciences also begin to be integrated during this course. **(1 credit hour)**

ASDD 505-01 Biomedical Integration & Critical Thinking III – In addition to the preceding courses, this D3 seminar requires the students to proceed more in-depth when reviewing the clinical cases since they have completed all of their didactic biomedical, behavioral and clinical sciences. This format also assists the students in preparing for case-based questions on the Integrated National Board Dental Examination. **(1 credit hour)**

ASDD 605-01 Biomedical Integration & Critical Thinking IV – In addition to the preceding courses, this D4 seminar requires the students to proceed more in-depth when reviewing the clinical cases since they have completed all of their didactic biomedical, behavioral and clinical sciences. This format is designed to provide a comprehensive summary of all sciences as it relates to direct patient care and other clinical cases. **(1 credit hour)**

MICR 302-01 - 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 antibodies and transmission of disease are stressed both as separate entities and in their applied aspects throughout the course. The course is offered during the first (fall) semester of the D1 year. **(5 Credit hours)**

ANAT 326-01 – Integrated Dental Neurosciences – The goal of the course is to provide the D1 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 offered during the second

(spring) semester of the D1 year. **(3 Credit Hours) *PHYS 321-01 – Physiology*** – The course provides D1 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. The course is offered during the second (spring) semester of the D1 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 terms 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 D1 year. **(8 credit hours)**

BICH 321-01 – 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 D1 year. **(6 credit hours)**

ANAT 322-01 – Gross Anatomy- 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 dissections 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 student's endeavors to reach an understanding of human micro- and ultra-structure that are 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 D1 year. **(10 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 D2 year. **(5 credit hours)**

CLINICAL SCIENCES DEPARTMENT OF ENDODONTICS

Mission of Meharry School of Dentistry Endodontics Department: 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 Endodontic treatment in a clinical environment is closely integrated with all other health disciplines.

Educational Goals and Objectives of the Oral Diagnostic Sciences and Research Department

- Goal 1: Provide comprehensive training that ensures students' knowledge and competence in endodontics.
 - Objective 1A: Demonstrate foundational didactic knowledge and insight in the biomedical sciences.
 - Objective 1B: Demonstrate a clinical skill in preventing and intercepting pulpal/periradicular pathosis and to preserve the natural dentition when affected by pathosis.
 - Objective 1C: Demonstrate knowledge of systemic/medical considerations impacting patient endodontic status and provision of care.
 - Objective 1D: Demonstrate knowledge of pathogenesis/management of oral mucosal pathoses.
 - Objective 1E: Demonstrate knowledge of and clinical skills in multidisciplinary patient care (prosthodontics, orthodontics, TMD, periodontics).
 - Objective 1F: Prepare students for practice following graduation by introduction to principles of practice management.
 - Objective 1G: Demonstrate professional/ethical behavior in all aspects of training and patient care.
- Goal 2: Provide instructional skills that will enable students to effectively communicate/transmit knowledge of endodontic and related subjects.
 - Objective 2A: Demonstrate ability to promote patient education and to be able to diagnose pulp and periapical pathosis, treatment planning, urgent/emergent treatment, vital pulp therapy, nonsurgical root canal treatment and outcome assessment.
- Goal 3: Prepare students for national boards and regional licensure.
 - Objective 3A: Successfully challenge the INBDE
 - Objective 3B: Successfully challenge regional licensure examinations
- Goal 4: Create an atmosphere which promotes critical thinking and scientific inquiry.
 - Objective 4A: Demonstrate knowledge of classic and current endodontic literature; including interpretation, analysis, and critical evaluation.
- Goal 5: Promote an Endodontic Department which embodies objectives consistent with the College's Strategic Plan.
 - Objective 5A: Maintain a culture based on excellence and accountability among endodontic faculty, staff, and students.
 - Objective 5B: Continuously seek opportunities to recruit qualified endodontic faculty.
 - Objective 5C: Promote continuing education opportunities for endodontic faculty and staff.
 - Objective 5D: Develop distinctive and pioneering approaches to teaching endodontics by remaining current with emerging trends.
 - Objective 5E: Promote endodontic faculty engagement with community service and patient recruitment opportunities.
 - Objective 5F: Actively seek opportunities to engage industry leaders and corporations for the donation of endodontic equipment and supplies.

COURSE DESCRIPTIONS

EDPR 431-01 – Pre-Clinical Endodontics - This D2 endodontic core course is designed to introduce the student to Endodontic 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 Endodontic 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 515-01 - Advanced Concepts in Endodontics - This D3 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 D3 student to diagnose, assess and treat Endodontic cases in the clinic. This is accomplished by expanding diagnostic concepts introduced in the core Endodontic course and basic Endodontic knowledge in the following areas: (1) diagnostic instruments and their use; (2) Endodontic surgery; (3) Endodontic pharmacology; (4) microbiology and immunology; (5) Endodontic emergencies, including traumatic dental injuries; (6) periodontal/Endodontic lesions; (7) prognosis and evaluation of success. **(1 Credit hour)**

EDPR 700-01 – Endodontics Clinic – This clinical course serves as a four-semester course spanning the D3 and D4 years. Successful completion of the D2 Endodontic core course and the D3 clinical entrance examination is needed to establish the student's clinical eligibility to treat patients in the Endodontic 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.

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 Endodontic case completed in the clinic. The student will self-evaluate his or her treatment and defend all modalities of treatment in the Endodontic case presentation. In addition, student will recall previously treated cases in order to determine prognosis and success of treatment rendered. **(2 credit hours)**

DEPARTMENT OF ORAL DIAGNOSTIC SCIENCES AND RESEARCH

Mission of Meharry School of Dentistry Oral Diagnostic Sciences and Research Department: To provide education for the competent management of disorders of the oral and maxillofacial region to dental students and graduate dental practitioners. Provide interdisciplinary care to patients in search of relief of head and neck pain, oral mucosal conditions and diseases, osseous disease, sleep breathing disorders, salivary complications, and diagnosis and treatment planning to restore health and function. Emphasize the responsibility of dental students in obtaining a thorough medical and dental history, performing a comprehensive head and neck and oral examination, and to obtain appropriate consultation for their patients. Promote evidence-based research in the areas of oral diagnostic sciences.

Educational Goals and Objectives of the Oral Diagnostic Sciences and Research Department

- Goal 1. Obtain and interpret a patient's chief concern, history of present illness, medical, dental, family, cultural, and social histories, and review of systems establishing a good health

risk assessment.

- Goal 2. Identify needs and make referrals to appropriate health care providers for the treatment of physiologic, psychological, craniofacial and systemic pain, and social conditions presented by dental patients.
- Goal 3. Teach skills in diagnosis, dental emergency management, treatment planning, and radiographic techniques, including cone-beam three-dimensional oral radiological evaluations.
- Goal 4. Explain and discuss with patients, parents, or guardians of patients who lack decisional capacity, findings, diagnoses, treatment options, realistic treatment expectations, patient responsibilities, time requirements, sequence of treatment, estimated fees, and payment responsibilities.
- Goal 5. Conduct evidence-based research to provide services in the differential diagnosis and treatment of orofacial diseases and disorders and related oral conditions to systemic disease.
- Goal 6. Teach students to perform a comprehensive head and neck and oral examination including clinical evaluation of the oral airway, and to obtain appropriate consultation for their patients.
- Goal 7. Determine the need to treat or refer treatment of oral lesions and conditions for benign and malignant lesions.
- Goal 8. Focus an understanding of the principles of diagnosis and treatment of oral soft tissue disease in medically complex and non-medically complex patients; orofacial sensory disorders and pain; movement disorders including TMD; salivary gland disease, oral manifestations of systemic disease; sleep disorders including airway obstruction, and medical management breathing.
- Goal 9. Obtain a caries risk assessment on each patient and counsel patients promoting good oral hygiene techniques and diet.

COURSE DESCRIPTIONS

ORDG 300-01 – Introduction to Oral Diagnosis – This course introduces D1 students to anatomical oral anatomy and provides them with insight into performing head and neck examinations. **(2 credit hours)**

ORDG 301-01 Oral Radiology & ORDG 421-01 - Oral Diagnosis & Radiology - This D1 and D2 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. 301-01 **(2 credit hours)**, ORDG 421-01 **(2 credit hours)**

ORDG 303-01 Introduction to Clinical Research - This D1 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)**

ORDG 304-01 Essentials Dental Sleep MED - This course provides a comprehensive and detailed study into the vast array of medical conditions associated with sleep-related disorders. Students will learn and identify physical characteristics, etiology, epidemiology, prevalence, and clinical presentations sleep related disorders and sleep apnea. Topics will include management of patients with sleep apnea, Referring patients with signs and symptoms of sleep related disorders, oral device treatment, and CPAP, BIPAP, and APAP

treatment devices (1 credit hour)

ORDG 700-01 – Oral Diagnosis & Radiology Clinic – This clinical course serves as a four-semester coursespanning the D3 and D4 years. Through participation in this D3 and D4 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. Additionally, students assess and treat patients with dental pain emergencies. (2 credit hours)

ORDG 493-01 – Comprehensive Treatment Planning – This course is designed to teach students the fundamentals of treatment planning using an integrated approach. (1 credit hour)

ORDG 593-01 – Comprehensive Treatment Planning Seminar – This D3 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)

ORDG 401-01 – Oral & Maxillofacial Pathology – This 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, adverse effects on the oral cavity from radiation and chemotherapy treatment, and diagnostic concepts relative to benign and malignant appearance on radiographs. Emphasis is placed on formulating a reasonable differential diagnosis and when to refer patients for a biopsy. (3 credit hour)

ORDG 575-01 – Internal Medicine – This D3 course introduces students to the concept of treating medically complex patients. The course provides a comprehensive and detailed study into the vast array of medical conditions which effect oral and dental treatment of dental patients. Due to the increasing average age of the population, more medically complex patients are living longer with complex medical conditions. Students will learn and identify physical

characteristics, etiology, prevalence, and clinical presentations of systemic diseases. Topics include management of patients with medically complex conditions, obtaining medical consults, pharmacological treatment, and medical referral when indicated. (3 credit hours)

ORDG 404-01 – Essentials of Dental Sleep Medicine – This course provides a comprehensive and detailed study into the vast array of medical conditions associated with sleep-related disorders. Students will learn and identify physical characteristics, etiology, epidemiology, prevalence, and clinical presentations sleep related disorders and sleep apnea. Topics include management of patients with sleep apnea, referring patients with signs and symptoms of sleep related disorders, oral device treatment, and CPAT, BIPAP, and APAT treatment devices. (1 credit hour)

ORDG 693-01 – Comprehensive Treatment Planning Seminar - This course expounds upon the Comprehensive Treatment Planning course. Students must identify and defend a case and comprehensive dental treatment plan before a multidisciplinary panel of faculty members. (1 credit hour)

DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY

Educational Objectives of the Oral and Maxillofacial Surgery Department

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 - Oral & Maxillofacial Surgery & Anesthesia I - This D2 year course in the department that teaches the students all aspects of the administration of local anesthesia. Students are taught the pharmacology, biochemistry, anatomy, and physiological aspects of local anesthesia administration. The students are taught through lectures demonstration and participation the basic local anesthesia injection techniques of infiltration and block anesthesia. The students are exposed to the exodontia which includes history taking, physical evaluation and the armamentarium used in basic uncomplicated exodontia, along with indications and contraindications of exodontia. Lectures and power point presentations will be used. **(2 credit hours)**

ORSG 502-01 - Oral & Maxillofacial Surgery & Anesthesia II - This D3 course, students are introduced to nitrous oxide oxygen administration. The 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 para oral 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 power point presentations and demonstrations. **(3 credit hours)**

ORSG 503-01 - Oral & Maxillofacial Surgery & Anesthesia III - This D3 two semester course is designed to introduce students to the fundamentals of anxiety and pain control. The students are exposed to the different routes of administration of sedatives and hypnotics, the pharmacology of the administered drugs with the expected clinical effect. Recognition and management of complications of administration of anxiolytic drugs are taught by lectures and demonstrations. Students are exposed to the didactic administration of general anesthesia and the actual administration of nitrous oxide inhalation sedation. **(2 credit hours)**

ORSG 700-01 – Oral & Maxillofacial Surgery Clinic – This clinical course serves as a four-semester course spanning the D3 and D4 years. Additionally, this 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 chair-side the principles taught in the Oral & Maxillofacial Surgery & Anesthesia didactic courses in addition to Cardiopulmonary Resuscitation. The students will also become competent in administration of nitrous-oxide inhalation sedation. **(2 credit hours)**

ORSG 492-01 AND ORSG 692-01 - Cardiopulmonary Resuscitation (CPR) - This D2 and D4 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)**

DEPARTMENT OF ORTHODONTICS

Mission of Meharry School of Dentistry Orthodontic Department: This department 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.

Educational Goals and Objectives of the Orthodontic Department

- Goal1: Provide foundational knowledge which relates to the study of Orthodontics & Dentofacial Orthopedics.
 - o Objective 1A: Provide underlying fundamental principles as it relates to orthodontic malocclusions.
 - o Objective 1B: Demonstrate how syndromes affect Dentofacial Orthopedics and the biomedical causes for the syndromes.
 - o Objective 1C: Describe the basis of biomedical principles which affect the etiology of various malocclusions.
 - o Objective 1D: Illustrate how biomedical sciences relate to orthodontic tooth movement.
 - o Objective 1E: Be knowledgeable of the four major tissue systems
 - o Objective 1F: Know the nature of skeletal growth especially of the craniofacial complex
- Goal 2: Comprehension which will enable students to be able to differentiate between normal occlusion and malocclusion.
 - o Objective 2A: Students will be able to recognize and describe Angle's three classes of malocclusion.
 - o Objective 2B: Prepare students to recognize malocclusions which occur in various planes of space.
 - o Objective 2C: Familiarize students with malocclusions which can be treated by general dentists and those which should be referred to orthodontists.
 - o Objective 2D: Understand the etiology of orthodontic problems.
- Goal 3: Ensure that students can complete an orthodontic examination on patients.
 - o Objective 3A: Students will be familiar with the clinical evaluation of orthodontic patients.
 - o Objective 3B: Students will know which diagnostic records are needed prior to orthodontic treatment.
 - o Objective 3C: Understand the concepts that comprise an orthodontic diagnosis.
- Goal 4: Integrate biomedical and behavioral factors with clinical factors related to Orthodontics and Dentofacial Orthopedics.
 - o Objective 4A: Students must demonstrate knowledge regarding the principles and theories of orthodontic tooth movement.
 - o Objective 4B: Demonstrate how biochemistry, physiology, and other biomedical sciences play a role in the development of orthodontic problems.
 - o Objective 4C: Recognize how clinical appearance relates to behavioral factors.
 - o Objective 4D: Recognize how behavioral factors, e.g., oral habits can lead to malocclusions.
- Goal 5. Provide knowledge regarding the treatment of orthodontic problems.
 - o 5A: Recognize and be familiar with the various types of removable and fixed orthodontic appliances.
 - o 5B: Know which orthodontic appliances should be used by general dentists and those used by orthodontists.
 - o 5C: Demonstrate knowledge in how to place and adjust removable and limited fixed orthodontic appliances used by general dentists.

COURSE DESCRIPTIONS

ORTH 422-01 – Orthodontics I - This D2 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 taking of alginate impressions on students, fabrication of orthodontic models, and tracing of a lateral cephalograph. **(2 credit hours)**

ORTH 521-01 – Orthodontics II - This D3 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. **(1 credit hours)**

ORTH 700-01 – Orthodontics Clinic – This clinical course serves as a four-semester course spanning the D3 and D4 years. Emphasis is placed on diagnosis, treatment planning, and treatment strategies for preventive, interceptive and comprehensive orthodontic cases. Additionally, the course provides a review of topics covered in the ORTH 422-01 and ORTH 521-01 courses. When possible, students are encouraged to provide minor tooth movement on patients with simple orthodontic appliances. D4 students must be able to pass a final clinical competency examination to assess their ability to diagnose various types of malocclusion and determine if it can be treated by a general dentist or referred to an orthodontist. **(2 credit hours)**

DEPARTMENT OF PEDIATRIC DENTISTRY

Mission of Meharry School of Dentistry Pediatric Dentistry Department: 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, motivational interviewing with parents, and a strong appreciation for health promotion. Minimal expectations of students to assure demonstrated competencies are emphasized in:

Educational Goals and Objectives of the Pediatric Dentistry Department

- Goal 1. Preventive services and treatment of conditions to include plaque control, patient education, and emergency treatment of pain and infection.
- Goal 2. 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.
- Goal 3. Maintenance and/or restoration of space in the dental arch to achieve or retain adequate esthetics and function.
- Goal 4. 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 - This D2 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. **(3 credit hours)**

PEDN 511-01 - Pediatric Dentistry - This D3 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 520-01 Pediatric Dentistry Seminar – **(1 credit hours)** – This course provides a review of key pediatric dentistry concepts as seen on the INBDE via the use of: small group activities and presentations.

PEDN 700-01 – Pediatric Dentistry Clinic – This clinical course serves as a four-semester course spanning the D3 and D4 years. 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. Additional emphasis is placed on emergency management, medical complications, care for the handicapped, and treatment in the hospital. **(2 credit hours)**

DEPARTMENT OF RESTORATIVE DENTISTRY

Mission of Meharry School of Dentistry Restorative Dentistry Department: 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 biodental materials, pre-clinical restorative procedures involving caries detection and removal, cavity design, choosing restorative materials, dental implantology, 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.

Educational Goals and Objectives of the Restorative Dentistry Department

- Goal 1. Provide students with the fundamentals of dental anatomy and occlusion.
- Goal 2. Provide students with instruction in dental materials and material science.
- Goal 3. Provide students with instruction in operative dentistry.
- Goal 4. Provide students with instruction in the area of prosthodontics.

COURSE DESCRIPTIONS

PROS 310-01 Dental Anatomy and Occlusion – This course will provide the student knowledge in the anatomical and morphological characteristics of the teeth and related structures. It will also include a study of eruption sequence for the primary and permanent teeth as well as a study of pulp morphology for each type of tooth. Student will gain a thorough understanding of the anatomic relationship that exists between the dynamics of mandibular movement (anatomy and physiology of the stomatognathic system) and occlusal morphology. **(10 credit hours)**

OPDN 420-01 Dental Auxiliary Utilization – This D1 course provides students with the basic in working alongside dental assistants in the operatory. **(1 credit hour)**

OPDN 325-01 Biodental Materials – This D1 course presents the basic chemical and physical properties of dental materials as they relate to their manipulation by the dentist. Students will identify components of the stress strain curve, chemical properties of impression materials, and the difference between types of gypsum products. Concepts in colorimetry are also discussed. **(2 credit hours)**

EDPR 400-01 Basic Interdisciplinary Implantology – This is a D2 course which includes a didactic and a laboratory segment. This course which integrates Restorative Dentistry, Oral Surgery and Periodontics provides an introduction to dental implants. This course examines the implant-bone interface and the concept of osseointegration, along with discussions on evaluating, diagnosing and treatment planning dental implant patients. **(1 credit hour)**

PROS 412-01 Removable Partial Dentures - This D2 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. **(2 credit hours)**

PROS 422-01 Complete Dentures - This D2 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 I - This D2 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. **(13 credit hours)**

EDPR 500-01 Advanced Interdisciplinary Implantology – This D3 course is designed to expose students to evidence based dental implantology. The students are divided into small groups where discussion of clinical cases occurs. **(1 credit hour)**

PROS 501-01 Fixed Prosthodontics II - This D3 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. **(1 credit hour)**

PROS 520-01 – Prosthodontics Seminar – This D3 course provides students with an overview of advanced removable prosthetics. **(1 credit hour)**

PROS 700-01 – Prosthodontics Clinic – This clinical course serves as a four-semester course spanning the D3 and D4 years. 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; to 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. **(15 credit hours)**

PROS 511-01 - Occlusal Adjustment - This D3 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. **(2 credit hours)**

OPDN 321-01 - Introduction to Operative Dentistry - This D1 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- Pre-Clinical Operative Dentistry- This D2 technique course is designed to give the D2 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 hours)**

OPDN 421-01 - Biodental Materials Seminar - This D2 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 operator. **(1 credit hour)**

OPDN 501-01 - Operative Dentistry Seminar - This course is designed to acquaint the D3 student with clinical procedures and regulations; to relate, review and reinforce the knowledge gained in the pre-clinical Operative Dentistry course and the D2 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 D2 course in Operative Dentistry. **(1 credit hour)**

OPDN 700-01 – Operative Dentistry Clinic – This clinical course serves as a four-semester course spanning the D3 and D4 years. 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. **(19 credit hours)**

ASDD 531-01 - Regional Licensure Review I – This D3 course provides students with practical examinations aimed

at developing the psychomotor skills needed to successfully challenge regional licensure examinations. **(1 credit hour) ASDD 631-01 - Regional Licensure Review II** – This D4 course provides students with practical examinations aimed at developing the psychomotor skills needed to successfully challenge regional licensure examinations. **(1 credit hour)**

DEPARTMENT OF PERIODONTICS

Mission of Meharry School of Dentistry Periodontics Department: 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.

Educational Goals and Objectives of the Periodontics Department

- **Goal 1: Provide comprehensive training that assures students' knowledge and competence in periodontics.**
 - Objective 1A: Demonstrate foundational didactic knowledge and insight in the biomedical sciences.
 - Objective 1B: Demonstrate a clinical skill in a comprehensive variety of periodontal and dental implant treatment modalities.
 - Objective 1C: Demonstrate knowledge of systemic/medical considerations impacting patient periodontal status and provision of care.
 - Objective 1D: Demonstrate knowledge of pathogenesis/management of oral mucosal pathoses.
 - Objective 1E: Demonstrate knowledge of and clinical skills in multidisciplinary patient care (prosthodontics, orthodontics, TMD, endodontics).
 - Objective 1F: Prepare students for practice following graduation by introduction to principles of practice management.
 - Objective 1G: Demonstrate professional/ethical behavior in all aspects of training and patient care.
- **Goal 2: Provide instructional skills that will enable students to effectively communicate/transmit knowledge of periodontics and related subjects.**
 - Objective 2A: Demonstrate ability to promote patient education and teach oral hygiene instructions.
- **Goal 3: Prepare students for national boards and regional licensure.**
 - Objective 3A: Successfully challenge the INBDE
 - Objective 3B: Successfully challenge regional licensure examinations
- **Goal 4: Create an atmosphere which promotes critical thinking and scientific inquiry.**
 - Objective 4A: Demonstrate knowledge of classic and current periodontal and Implant literature; including interpretation, analysis, and critical evaluation.
- **Goal 5: Promote a Periodontics Department which embodies objectives consistent with the College's Strategic Plan.**
 - Objective 5A: Maintain a culture based on excellence and accountability among periodontics faculty, staff, and students.
 - Objective 5B: Continuously seek for opportunities to recruit qualified periodontist faculty.
 - Objective 5C: Promote continuing education opportunities for periodontics faculty and staff.
 - Objective 5D: Develop distinctive and pioneering approaches to teaching periodontics by remaining current with emerging trends.
 - Objective 5E: Promote periodontics faculty engagement with community service and patient recruitment opportunities.
 - Objective 5F: Actively seek opportunities to engage industry leaders and corporations for the donation of periodontics equipment and supplies.

COURSE DESCRIPTIONS

EDPR 300-01 -- Periodontics – This D1 course integrates the didactic material learned by the students during the fall and spring semesters of the academic year. **(3 credit hours)**

EDPR 422-01 - Periodontics - This pre-clinical course is offered in the D2 year. Students are introduced to the principles

of periodontal disease prevention, diagnosis, and non-surgical periodontal therapy through lectures and laboratory, and clinical exercises. Students work in teams of two practicing examination and treatment techniques in the clinic to build the skills necessary to treat patients. **(3 credit hours)**

EDPR 511-01 - Periodontics 2 - This didactic course is offered in the D3 year. The course focuses the various forms of surgical procedures that are performed in Periodontics along with their purposes, indications and expected outcomes. **(2 credit hours)**

EDPR 701-01 - Periodontics Clinic – This clinical course serves as a four-semester course spanning the D3 and D4 years. Throughout the course, students treat patients in the clinic under the supervision of faculty. One-on-one instruction is emphasized to ensure that each student develops the skills to treat Gingivitis, and Mild-to-Moderate Chronic Periodontitis. Students also assist with surgical therapy to foster a familiarity of various surgical techniques. **(8 credit hours)**

BEHAVIORAL/ CLINICAL SCIENCES DEPARTMENT OF DENTAL PUBLIC HEALTH

Mission of Meharry School of Dentistry Dental Public Health Department: 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.

Educational Goals and Objectives of the Dental Public Health Department

The pre-doctoral curriculum includes:

- Goal 1. The sociology and psychology of dentistry
- Goal 2. The epidemiology of oral conditions
- Goal 3. Health policy and the planning of oral health services
- Goal 4. The organization and delivery of care to patient populations with special needs
- Goal 5. Knowledge and Skills in Interpersonal Communication
- Goal 6. Needs Assessment and Treatment Planning
- Goal 7. Consultative and Inter-professional Relations
- Goal 8. Quality Assurance
- Goal 9. Coordination of Dental Team Responsibilities
- Goal 10. Principles of Proactive Management
- Goal 11. Cultural Competency

COURSE DESCRIPTIONS

PDNT 311-01 Dental Ethics & Jurisprudence I – In this D1 course, five ethical paradigms/approaches are provided: utilitarian approach, fairness and justice, common good approach, rights approach, and virtue approach. Students keep a journal about the ethical decision making they are making in their personal lives. The class includes group work on the ethical models using biomedical case studies related to patient confidentiality, reporting, treatment of patients with HIV, and cultural competency. Students review the ADA Code of Conduct and its guidance on ethical decision making and professional responsibility. **(1 credit hour)**

PDNT 322-01 Applied Nutrition - The primary focus of this D1 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 Dental Education -This D2 course introduces the student to dental public health. This course will also provide the D2 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 410-01 Dental Ethics & Jurisprudence II – This D2 course explores ethical paradigms and introduces dental students to legal terminology related to the practice of dentistry. The course will enable the students to critically think

through ethical dilemmas that they may encounter as dental students and later as practitioners in the dental profession. **(1 credit hour)**

PDNT 411-01 Cultural Competency in Healthcare - This D2 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 415-01 Dental Informatics – This course teaches the application of computer and information science to improve dental practice, research, education and management. The concepts of this course, taught during the D2, are widely applicable throughout the student's educational and professional life. **(1 credit hour)**

PDNT 501-01 Practice Management - This D3 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)**

ASDD 323-01 Integrated National Board Dental Examination Review I (INBDE Review I) – This course is designed to provide D1 year dental students with a review of high yield concepts as it relates to the Integrated National Board Dental Examination. The areas discussed include the biomedical sciences (gross anatomy, microbiology, physiology, neurosciences, and pathology), restorative dentistry (prosthodontics and operative dentistry), and oral diagnosis (oral radiology and oral pathology). **(6 credit hours)**

ASDD 400-01 Integrated National Board Dental Examination Review II (INBDE Review II) – This course is designed to provide D2 year dental students with a review of high yield concepts as it relates to the Integrated National Board Dental Examination. The areas discussed include restorative dentistry (prosthodontics and operative dentistry), oral diagnosis (oral radiology and oral pathology), endodontics, orthodontics, pediatric dentistry, patient management (public health, behavioral management, and research), oral surgery, periodontics, and pharmacology. **(1 credit hour)**

ASDD 503-01 Integrated National Board Dental Examination Review III (INBDE Review III) – This course is designed to provide D3 year dental students with a review of high yield concepts as it relates to the Integrated National Board Dental Examination. The areas discussed include restorative dentistry (prosthodontics and operative dentistry), oral diagnosis (oral radiology and oral pathology), endodontics, orthodontics, pediatric dentistry, patient management (public health, behavioral management, and research), oral surgery, periodontics, and pharmacology. **(1 credit hour)**

PDNT 521-01 –Behavioral Management in Dental Practice- This D3 course is designed to provide students an opportunity to develop communication skills for interacting appropriately with patients, peers, and other health care professionals. The course integrates topics such as communication in the healthcare setting, cultural considerations, gift taking/giving, non-verbal communication, the use of assertiveness, persuasion and motivation, managing medically compromised patients. Additional topics include respect, empathy, paternalism, autonomy and abuse/trauma, all of which contribute to understanding the psychological needs of the patient. **(1 credit hour)**

PDNT 522-01 Community Dental Health II- This D3 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 D3 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)**

ASDD 615-01 Final Competency Exam (FCE) – This course represents the final course required to measure competency in a D4 student. It is comprised of an amalgamation of all FCEs completed by the student in each of their clinical courses.

(2 credit hours)

ASDD 402-01 Structured Academic Review – This course is offered to enhance students' skillsets in preparation for national board examinations. The course also integrates hands-on psychomotor instruction to ensure students retain the necessary hand skills prior to entering clinics. **(15 credit hours)**

Public Health Certificate Program (for Dental Students)

Educational Objectives

The Public Health Certificate Program is a collaboration between the School of Dentistry and the School of Graduate Studies (specifically the School of Public Health). The Public Health Certificate Program is part of the overall predoctoral curriculum. Students who have a master's level public health degree (or higher), may apply for exemption from certain previously completed courses. To earn the certificate, students must complete the following courses:

COURSE DESCRIPTIONS

MSPH 764-01 Foundations in Public Health - This course provides an introduction to public health concepts and practice. It examines the purpose, history, organization, functions, activities, and outcomes of public health practice at the national, state, and community levels. This course will include faculty and guest lectures, article reviews and practical experiences that aim to explore and discuss important problems and issues facing public health. This course will focus on methods of health research, epidemiology, communication, health economics, and writing skills. **(3 credit hours)**

GMPH 700-01 Epidemiology I - This introductory course features biostatistical concepts, principles, and methods used in public health and biomedical science disciplines. Taught as part of the core curriculum for all students in Master of Science in Public Health, the major goal of this course is to enable students to acquire relevant knowledge and skills applicable to public health research and practices. Specific topics include methods for describing central tendency and variability in data; and performing inference and hypothesis testing on population mean and proportion differences. **(3 credit hours)**

GMPH 804-01 Theories in Health and Social Behavior - This course will provide the dental students with 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. **(2 credit hours)**

GMPH 702-01 Biostatistics I - 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 basic knowledge and its 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)**

Courses Specific to School of Dentistry for Public Health Certificate:

Additionally, four courses offered within the traditional MMCSOD curriculum qualify as credit towards the Public Health Certificate. These courses include: Community Dental Health II (PDNT 522-01), Practice Management (PDNT 501-01), Pediatric Dentistry Clinic (PEDN 700-01), and Final Clinical Competency Exam (ASDD 615-01).

Elective/Optional Course(s) for Public Health Certificate:

MSPH 700-01 Health Administration - This D2 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. **(3 credit hours)**

International Track Program

Educational Objectives

The MMCSOD International Track Program is a 2-year training program designated for foreign-trained dentists. By completing the International Track Program, graduates will earn a D.D.S. degree (which is one component) needed to apply for a dental license in any state. Students in the International Track Program must complete the following course(s):

COURSE DESCRIPTIONS

ASDD 533-01 Comprehensive Pre-Clinical Dentistry - The purpose of this course is to provide a fast-track intensive preclinical course designed to calibrate the International trained Dentist enrolled to ensure that they may safely begin patient care that meets the standard of oral health care in the United State, CODA-accredited institutions. This course includes restorative dentistry, complete and removable prosthodontics, esthetic dentistry, oral radiology, oral surgery, diagnostic radiology, pediatric dentistry, endodontics and medical emergencies. **(15 credit hours)**.

Additionally, International Track participants must complete didactic and clinical courses offered within the traditional MMCSOD curriculum.

Didactic International Track Courses:

During the ID3 year (first year of the program), these courses include: Regional Licensure I (ASDD 531-01), Biomedical Integration & Critical Thinking III (ASDD 505-01), Introduction to Lifelong Learning III (ASDD 511-01), Geriatric Dentistry (PDNT 561-01), Hospital Dentistry (HOSD 521-01), and Comprehensive Treatment Planning Seminar (ORDG 593-01). During the ID4 year (second year of the program), these courses include: Regional Licensure II (ASDD 631-01), Biomedical Integration & Critical Thinking IV (ASDD 605-01), Introduction to Lifelong Learning IV (ASDD 612-01), CPR (ORSG 692-01), and Comprehensive Treatment Planning Council (ORDG 693-01).

Clinical International Track Courses:

Students must be enrolled in all clinical courses during both the ID3 and ID4 year. These courses include Endodontics Clinic (EDPR 700-01), Oral Diagnostic Sciences Clinic (ORDG 700-01), Operative Dentistry Clinic (OPDN 700-01), Oral and Maxillofacial Surgery Clinic (ORSG 700-01), Orthodontics Clinic (ORTH 700-01), Pediatric Dentistry Clinic (PEDN 700-01), Periodontics Clinic (EDPR 701-01), and Prosthodontics Clinic (PROS 700-01), and Final Clinical Competency Exam (ASDD 615-01).

Division of Graduate Programs

Educational 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:

1. **General Practice Residency Program-** The General Practice Residency program is a one-year, accredited program that is affiliated with the Nashville General Hospital, Nashville Veterans Affairs Hospital, and Murfreesboro 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.
2. **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, Nashville General Hospital, Nashville Veterans Affairs Hospital, Mission Memorial Hospital, Monroe Carell, Jr Children's Hospital at Vanderbilt University, University of Tennessee Knoxville Medical Center, Blanchfield Army Community Hospital at Fort Campbell, and Marvel Cosmetic Surgery Center. Residents receive a certificate after successfully completing the program and are eligible to apply for American Board Certification by examination.
3. **Pediatric Dentistry Residency Program-** The Pediatric Residency program is a two-year accredited program provides residents with the opportunity to receive specialty training in pediatric dentistry while serving an underrepresented population. Resident training is both an inpatient and outpatient service of the School of Dentistry and participates in rotations through Nashville General Hospital, Meharry Medical College Pediatric Medicine, and Vanderbilt University Medical Center. 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.

COURSE DESCRIPTIONS

ASDD 311-01, ASDD 411-01, ASDD 511-01, & ASDD 612-01 Introduction to Lifelong Learning I-IV— The Lifelong Learning course is equivalent to twenty (20) clock hours. Students must earn a minimum of thirteen (17) 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 also provide an opportunity 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. **ASDD 311-01, ASDD 411-01, ASDD 511-01, & ASDD 612-01 (1 credit hour)**

School of Dentistry Faculty

Department of Dental Public Health

Professors: Cherae Farmer, D.D.S, M.S.P.H, M.B.A; Jacinta Leavell, Ph.D.; M.S., Warren Rueben, D.D.S., M.P.S, D.Ph., M.Div.

Associate Professors: David Miller, DDS; Machele Thompson, R.D.H, M.S.P.H.;

Department of Endodontics

Assistant Professors: Garfield Batchelor, D.D.S.; Ashley Harrison, D.D.S.; Seyed Amir Mousavi, D.D.S., M.S.; Terence Turner, D.D.S.

General Practice Residency Program

Associate Professor: Gibson Johnson, D.D.S.; Henry Young, D.D.S., M.S., Valencia McShan, D.D.S.

Assistant Professor: Brandon Davison, D.D.S.; Africa Jimerson-Hayes, D.D.S.; Gibson Johnson, D.D.S.; Joseph Rollings, D.D.S., M.S.; Jessica Williams, D.D.S.

Department of Oral and Maxillofacial Surgery

Associate Professor: Robin Daniel, D.D.S.; Kimberley Perkins-Davis, D.D.S., M.B.A.

Assistant Professor: Adeseye Awe, D.D.S., R.N., B.S.N., Shrin Shahnaseri, D.D.S., M.S.

Clinical Instructor: Jerrell Jones, DDS; Jeremy Medlock, D.M.D.

Department of Oral Diagnostic Sciences and Research

Professors: James Cade, D.D.S.; Pandu Gangula, M.S., Ph.D.; Hue Xie, D.D.S., M.S., Ph.D.

Associate Professors: Zaid Khoury, D.D.S., Ph.D.; Steven Silberg, D.D.S. M.D.T.

Assistant Professors: Anissa Burgess, D.D.S., Kadene Falconer, D.D.S.; Alexis Ferguson, D.D.S.; Benita Jackson, D.D.S.; Eric Williams, D.D.S.; Conrad Douglas, D.D.S.; Mialika Watkins, D.D.S.;

Instructor: Chethan Sampath, D.D.S.;

Department of Pediatric Dentistry

Associate Professors: Kerin Burdette, D.D.S., M.P.H.-D.;

Assistant Professors: John Kenney, D.D.S., M.S.;

Carol Nixon-Wesby, D.D.S.; Mirissa Price, D.M.D.; Sandra Trice, D.D.S.; Shana Warren-Byers, D.D.S., M.Ed.

Adjunct Assistant Professors: Meaghan Daughtery-Barnes, D.D.S.; Teresa Perkins, D.M.D.

Department of Orthodontics

Associate Professor: Thad Champlin, D.D.S.; Sandra G. Harris, D.D.S

Assistant Professors: Terrance Campbell, D.M.D., M.S.; John Philopose, D.M.D., M.B.A., M.S., Ph.D.;

Adjunct Assistant Professors: Heather Brown, D.D.S.;

Department of Periodontics

Associate Professors: David Mott, D.M.D., M.S.; Leela Subhashini C. Alluri, B.D.S., M.S.D.; John Harvey, DDS, PhD, M.S., B.Sc; Denise Mustiful-Martin, D.D.S., M.S.

Assistant Professor: Vickie Jones, R.D.H., M.S., D.Hsc. (Clinical Affairs)

Adjunct Instructor: Kerwin Scott, DDS, M.S, BS

Clinical Instructor: Breana Smith, R.D.H.

Department of Restorative Dentistry

Professor: James E. Tyus, D.D.S., FICD

Associate Professors: George Butler, D.D.S.; Ethel Harris, D.D.S., MPH; William P. Davis, D.D.S., M.S.P.H.;

Angela Graves, D.D.S, M.S.; Julie Gray, D.D.S., M.A.; Melvin Hill, D.D.S.; Harvey Latimer, D.D.S.; Michael McBride, D.D.S; M.A.; Valencia McShan, D.D.S.;

Anita Sykes-Smith, D.D.S., M.B.A.;

Assistant Professors: Bryan Baker, D.D.S., Thomas E. Brannon, D.D.S.; Scott Brown, D.D.S; Paul Denemark, D.D.S.; Roderick Frazier, D.D.S; Ruthie Jimerson, D.D.S.; Africa Jimerson-Hayes, D.D.S.; Vaughn Kearbey, D.D.S.; Eric Oates, D.D.S.; Aldrich T. Perry, D.D.S.; Coley Ramsey, D.D.S.; David Smith D.D.S. M.E.D.; Kelli Turner, D.D.S., M.S.P.H.

Instructor: Daisey Smart, D.D.S; Monica Williams Davidson, D.D.S.

Clinical Affairs

Oral Diagnostic Science:

Assistant Professor: Brian Baker, D.D.S., FAACP;

Restorative Dentistry:

Associate Professor: George Butler, D.D.S.; Ethel Harris, D.D.S., MPH, FACD; Harvey Latimer, D.D.S.; Anita Sykes-Smith, D.D.S., M.B.A.;

Assistant Professor: Joyce Barbour, D.D.S., MBA, FACD, FICD; Olof Blomberg; Thomas Brannon, D.D.S.; Scott Brown, D.D.S.; Jokreide Butler, D.D.S.; Rodrick Frazier, D.D.S.; Aldrich T. Perry, D.D.S.; Coley Ramsey, D.D.S.; Kelli Turner, D.D.S., M.S.P.H.

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Periodontics:

Associate Professor: Vickie Jones, RDH, DHSc, MS;

Total Health:

Assistant Professor: Miguel Burgess, D.D.S.; Vincent Copeland, D.D.S.;

SOM Basic Science Cross-School Core Teaching Faculty

Department of Biochemistry, Cancer Biology, Neurosciences and Pharmacology:

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

Department of Microbiology, Immunology and Physiology:

Chairperson: Chandravanu Dash, Ph.D. (Dental Microbiology)

Professors: Bindong Liu, Ph.D. (Dental Microbiology), Xinhong Dong, Ph.D. (Dental Microbiology), Donald Alcendor Ph.D. (Dental Microbiology), Minu Chaudhuri Ph.D. (Dental Microbiology)

Associate Professors: Dorin B. Borza, Ph.D. (Dental Microbiology), Byeongwoon Song, Ph.D. (Dental Microbiology),

Assistant Professor: Muthukumar Balasubramaniam, Ph.D. (Dental Microbiology),

Department of Pathology:

Chairperson: Billy R. Ballard, M.D., D.D.S., Professor (Pathology, Histology)

Associate Professors: Digna Forbes, M.D. (Pathology)

Department of Professional and Medical Education:

Chairperson: Sakina Eltom, D.V.M., M.S., Ph.D. (Professor & Chair)

Professors: Emmanuel Atta-Asafo-Adjei, Ph.D. (Biochemistry); Alfred M. Nyanda, Ph.D. (Dental Neurosciences, Pharmacology), Evangeline Motley-Johnson, PhD (Physiology), Edilberto Raynes, MD, MPH (Physiology)

Assistant Professors: Anita Austin, Ph.D. (Gross Anatomy), Shalonda Ingram, Ph.D. (Pharmacology)

Instructors: Jenny Ousley, MD, Newton Ford, MD (Gross Anatomy)

Professor Emeritus: Anthony Archibong, PhD (Physiology)

Internal Medicine:

Chairperson: Richard Fremont, M.D

Assistant Professor: Ethel Harris, D.D.S.

Department of Dental Public Health

Professors: Cherae Farmer, D.D.S, M.S.P.H, M.B.A; Jacinta Leavell, Ph.D.; M.S., Warren Rueben, D.D.S., M.P.S, D.Ph., M.Div.

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Anita Sykes-Smith, D.D.S., M.B.A.;

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Assistant Professor: Joyce Barbour, D.D.S., MBA, FACD, FICD; Olof Blomberg; Thomas Brannon, D.D.S.; Scott Brown, D.D.S.; Jokreide Butler, D.D.S.; Rodrick Frazier, D.D.S.; Aldrich T. Perry, D.D.S.; Coley Ramsey, D.D.S.; Kelli Turner, D.D.S., M.S.P.H.

Instructor: Daisy Smart, D.D.S.;

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SOM Basic Science Cross-School Core Teaching Faculty

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Chairperson: Chandravanu Dash, Ph.D. (Dental Microbiology)

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Assistant Professor: Muthukumar Balasubramaniam, Ph.D. (Dental Microbiology),

Department of Pathology:

Chairperson: Billy R. Ballard, M.D., D.D.S., Professor (Pathology, Histology)

Associate Professors: Digna Forbes, M.D. (Pathology)

Department of Professional and Medical Education:

Chairperson: Sakina Eltom, D.V.M., M.S., Ph.D. (Professor & Chair)

Professors: Emmanuel Atta-Asafo-Adjei, Ph.D. (Biochemistry); Alfred M. Nyanda, Ph.D. (Dental Neurosciences, Pharmacology), Evangeline Motley-Johnson, PhD (Physiology), Edilberto Raynes, MD, MPH (Physiology)

Assistant Professors: Anita Austin, Ph.D. (Gross Anatomy), Shalonda Ingram, Ph.D. (Pharmacology)

Instructors: Jenny Ousley, MD, Newton Ford, MD (Gross Anatomy)

Professor Emeritus: Anthony Archibong, PhD (Physiology)

Internal Medicine:

Chairperson: Richard Fremont, M.D

Assistant Professor: Ethel Harris, D.D.S.

School of Global Health Administration

Daniel E. Dawes, JD, DHL (Hon.) Founding Dean and Senior Vice President, Global Health

Nelson Dunlap, JD, Vice Dean

Alicia D. Holloway, EdD, MBA, Associate Dean, Curriculum Development and Academic Affairs

Ayanna Smith, MBA, Associate Dean for Business, Finance, and Administration

Celeste Philip, MD, MPH, Associate Dean, Applied Health Practice, Chair, Department of Public Health

Angelita P. Howard, EdD, MBA, Vice President for Global Education and Student Affairs

Fazal Khan MD, JD, Chair, Department of Political Determinants of Health

School of Global Health at Meharry

The Office of the Dean of the School of Global Health at Meharry Medical College serves as the chief academic and administrative officer of the school. With a dedication to the principles of Creativity, Action, Respect, and Equity, the Dean leads a pioneering institution focused on actualizing health equity both domestically and internationally. Assisting the Dean are the Office Leads and Department Chairs, who manage various strategic areas, including Communications, Applied Health Practice, Academic Affairs, Research, and Finance and Administration. The school is composed of five departments, including Population Health, Public Health, Political Determinants of Health, Mental Health, and Health Communications. Each department is led by a chairperson responsible for maintaining the quality, integrity, and fiscal stability of their programs, ensuring excellence in education, research, and practice, and fostering a collaborative and innovative environment dedicated to achieving global health equity.

Vision

Making health inequities history.

Mission

Empowering leaders to catalyze solutions to the world's most pressing and complex health challenges.

Vision Imperatives

Our values are interconnected and mutually reinforcing, all working to guide us to a brighter, more equitable tomorrow.



History and Purpose

The School of Global Health is rooted in Meharry's 150-year legacy of leading in health and health equity. As the nation's first and only School of Global Health we are committed to preparing the next generation of global health learners and leaders to find solutions and respond to our communities' complex and evolving health challenges with a global perspective. The School is a hub for research and academic innovation in global health, health policy, mental and behavioral health, population health, public health, environmental health, health communications, social and political determinants of health, and health administration. As a trusted resource and leader, the School approaches complex health issues with actionable solutions to the problems affecting everyone, especially our most vulnerable, under-resourced, and marginalized communities.

Research

- Advance Health Equity Research: Boost the research capabilities of scholars and students in the field of health equity, creating a robust pipeline for future leaders.
- Confront Legacy Challenges: Craft research frameworks that address health inequities, leveraging a history of authenticity and trust to foster global partnerships.

Education

Learning Outcomes

- Knowledge and comprehension of health disparities and inequities, and impact on health outcomes and longevity.
- Knowledge and comprehension of health policy and law, and impact on health equity.
- Knowledge and comprehension of the determinants of health and effective multi-level, multidisciplinary, and multi-sectoral interventions.
- Knowledge of global health issues and comparative studies.
- Apply quantitative and qualitative research and epidemiological methods to assess health inequities.
- Engage in community-based research.

List of Faculty by Program

- Department of Public Health
 - Leah Alexander, Ph.D., MPH*, Associate Professor
 - Whitney Barnett, Ph.D., MPH**, Assistant Professor
 - Allysceaeioun D. Britt, Ph.D., MPH*, Assistant Professor
 - Vanisha Brown, Ph.D., MPH*, Associate Professor
 - Chau-Kuang Chen, Ed.D.*, Professor
 - Chioma Kas-Osoka, Ph.D., MPH**, Assistant Professor
 - Celeste Philip, M.D., MPH, Professor
 - A. Dexter Samuels, Ph.D., MHA*, Professor
 - Mohammad Tabatabai, Ph.D.*, Professor
- Population Health
 - Michael C. Caldwell, M.D., MPH*, Professor
 - Wansoo Im, Ph.D.***, Professor
 - Celeste Philip, M.D., MPH**, Professor
- Political Determinants of Health
 - Nelson Dunlap, J.D.**, Assistant Professor
 - Fazal Khan, M.D., J.D.**, Professor
 - Alicia Holloway, Ed.D., MBA**, Assistant Professor
 - Angelita Howard, Ed.D., MBA**, Associate Professor
 - Rosemary Nabaweesi, DrPH, MBChB*, Associate Professor
 - Karen Winkfield, Ph.D., M.D.***, Professor

Academic Programs

Degree Programs

Doctor of Philosophy, Global Health Equity

The Doctor of Philosophy degree in Global Health Equity is designed to equip students with tangible and current skills to help solve today's real-world issues that are leading to disparities and inequities not just within the United States, but also globally.

This program aims to provide both domestic and global professional and scholarly experiences. Additionally, students will participate in distinguished lectureship series and skill-based workshops. Students will engage with world-class faculty who are passionate health equity champions, bringing a wealth of knowledge and professional experience to the classroom from various spaces such as, the Centers for Disease Control and Prevention, The White House, the United States Congress, World Health Organization, United Nations General Assembly, U.S. Department of Health and Human Services, Hospitals, Health Insurers, Biopharmaceuticals, Biotechnology, Medical

Device Companies, Disparities & Health Equity Research, Law & Policy, Responsible Artificial Intelligence, Geographic Information Systems, Medicine, Public Health, Management, Urban & Regional Planning, Clinical Trials, and more.

Doctor of Philosophy, Health Law, Policy, and Management

The Doctor of Philosophy degree in Health Law, Policy, and Management equips students with the knowledge and skills needed to delve deeper into the root causes of health outcomes among population groups in the United States. This interdisciplinary degree is designed to enable students to develop distinctive and pioneering approaches and interventions to tackle complex issues in an increasingly evolving health system.

Students will have the opportunity to be a part of the only doctoral program in health law, policy, and management that directly incorporates the Political Determinants of Health framework by Daniel E. Dawes. With top-ranked faculty, who incorporate his framework into effectuating change at the most upstream levels to have the greatest impact on moving the health equity needle forward. This program will be the first to apply such a unique lens across countries that may be facing similar challenges and sharing novel approaches to developing solutions together.

Master of Public Health

The Master of Public Health (MPH) degree program is committed to training students who seek optimal health and well-being for people, and their communities. The MPH degree program embraces the World Health Organization's definition of health: "a state of complete physical, mental, and social wellbeing, not merely the absence of disease or infirmity." Two tracks are currently offered: Epidemiology and Public Health Practice. Two additional tracks in global health and maternal health equity will be offered in the future.

Students in the MPH degree program receive a solid foundation in public health, which allows them to work as highly skilled professionals in public and private sectors at the local, state, federal, and international levels. Graduates of the program excel in diverse job settings, whether in health care, public health, health administration, epidemiology, or health policy.

Besides coursework, students participate in two required activities as part of their degree requirements. The first is referred to an Applied Learning Experience (APE), which may consist of working directly with local and state public health agencies, community-based organizations, managed care companies, hospitals, associations, or other non-traditional entities, focused on health. Often students will identify opportunities based on individual interests. These opportunities have resulted in employment opportunities for students that excel. The second is an Integrative Learning Experience (ILE), which is the production of a high quality, deliverable reflecting mastery of five selected CEPH competencies.

Master of Science, Health Equity

The Master of Science in Health Equity is designed to provide students with a comprehensive understanding of health disparities and inequities. Students will gain an in-depth knowledge of tools and resources to address and respond to the determinants of health resulting in inequities through policy analysis, community engagement, and intervention design. This program offers a Women's Health track.

Master of Science, Health Law, Policy, and Management

The Master of Science in Health Law, Policy, and Management equips students with a comprehensive understanding of healthcare and public health laws, regulations, policies, and management strategies. Graduates are prepared to navigate legal complexities, analyze policy implications, and effectively manage and promote efficient and equitable health outcomes through structural level interventions.

Applications

Applicants must satisfy all admission requirements. Final admission decisions will be made by the School of Global Health Faculty Admissions Committee (FAC). Admission decisions will be based on all aspects of the application submitted through the designated portal, including prior college-level academic performance in a baccalaureate or master's program at a regionally accredited institution, including coursework and independent research projects; prior and/or relevant work experience; personal statement and short answer responses submitted via the application portal; three recommendation letters requested through the application portal; and optional test scores, which may be submitted if applicants believe they will enhance their overall application. The School of Global Health reserves the right to rescind any offer of admission if any discrepancies are found during the admissions process.

Application Process

All completed applications received by the School of Global Health will be reviewed in a holistic manner. Each completed application is to be reviewed by three designated SGH Faculty Admissions Committee (FAC) members. Once an initial review has been completed, faculty will submit their recommendations for the applicant. Qualified applicants will be invited to participate in an interview with the FAC, on a pre-determined date. Applicants will receive an email notification with dates and times for interviews. Final decisions will be sent to the applicant via email and updated in their application portal.

PhD Admissions Process

Step 1

Complete your free SGH application here (no application fee required):

<https://student.wd12.myworkdaysite.com/meharrymedicalcollege/MMCSGH>

A. Complete your personal statement, please use the designated prompt below for your specific program (minimum of 500 words):

o Global Health Equity, PhD:

- I) Discuss one area of interest that you believe is hindering the progress of health outcomes and global health equity.
- II) How will you utilize the Global Health Equity PhD degree to overcome the observed challenge(s) in your chosen area of interest. The student is encouraged to discuss lived experiences (academic, professional, or personal) in their response.

o Health Law, Policy, and Management, PhD:

- § I) Identify an existing law or policy that has perpetuated health inequities. What amendments or reforms would you recommend to transform it into a tool for equity?
- § II) How will you utilize the Health Law, Policy, and Management PhD degree to overcome the observed challenge(s) in your chosen area of interest. The student is encouraged to discuss lived experiences (academic, professional, or personal) in their response.

B. Complete Short Answer Questions: complete the short answer questions with a maximum of 300 words permitted per response, located on the online application

Step 2

Gather your application documents:

- Personal Statement
- Resume or Curriculum Vitae
- Letters of Recommendation: Three letters of recommendation are required, at least two of which must be from an academic mentor (major professor, thesis advisor, etc.) who can speak to the applicant's potential to undertake graduate studies.
- Official transcripts:

Applicants must submit official transcripts of coursework attempted and completed at all previous colleges and universities, whether or not a degree was earned at the institution. Please ask your institution to send *official college transcripts* electronically directly to the School of Global Health at sghenrollment@mmc.edu

If the institution prefers to mail transcripts, please use this address:

School of Global Health
Meharry Medical College
3401 West End Avenue
Suite 160
Nashville, TN 37203

All submitted transcripts become the property of the Meharry Medical College and will not be returned. Test scores are not required for consideration into our program.

STEP 3

Final Decision

- Once all documents have been appropriately submitted to SGH, they will be reviewed by the Faculty Admissions Committee.
- Applicants being considered for the PhD must undergo an interview, SGH will contact applicants directly to coordinate a designated date and time.
- All applicants will receive a final decision response by e-mail.

STEP 4

Admitted Students

- Accept your admission decision by submitting your seat deposit. This will be sent via e-mail.
- Complete your FAFSA and make sure to send information to Meharry Medical College.
- Our central Office of Admissions and Recruitment at Meharry Medical College will contact you to begin your journey as a Meharrian.

Master of Public Health Admissions Process

Two easy ways to apply:

1. Complete your free SGH application here (no application fee required):

<https://student.wd12.myworkdaysite.com/meharrymedicalcollege/MMCSGH>

or

2. Complete your SOPHAS application here: <https://sophas.org/>

A complete application will include:

- A resume or CV
- A personal statement highlighting your career aspiration related to Public Health

- Official transcripts from all undergraduate and graduate schools
- Three academic or professional letters of recommendation. We require at least 2 from previous professors and 1 from an individual who is qualified to certify the applicant's abilities and/or character (i.e. mentor, academic advisor, employment supervisor)
- We are a test-optional program. Applicants may submit a GRE score if desired.

MPH Interview

After the completed application is reviewed by the MPH admissions committee, all qualified applicants will be invited to participate in an interview.

Admitted Students

- Accept your admission decision by submitting your seat deposit. This will be sent via e-mail.
- Complete your FAFSA and make sure to send information to Meharry Medical College.
- Our central Office of Admissions and Recruitment at Meharry Medical College will contact you to begin your journey as a Meharrarian.

Dates to Remember

Scholarship Consideration Deadline: December 15

Applications submitted by December 15 will be reviewed for merit-based scholarship opportunities. Only a select number of qualified applicants will be awarded. Scholarships are competitive and dependent on the strength of the applicant's completed application, supporting documents, and interview.

PhD Interviews: January – May

PhD interviews will take place beginning in January. Qualified applicants will be contacted by the School directly.

PhD Admissions Decisions: March

Final decisions will begin to be released in early March.

MPH Interviews:

Qualified applicants will be invited to participate in an interview. These will be offered on a rolling basis.

MPH Admissions Decisions:

Final decisions will be made on a rolling basis.

Final Application Deadline: May 1

All applications must be completed and submitted by May 1 for consideration.

Deferral Process

Admitted students may request to defer their enrollment for up to one calendar year. Prior to requesting a deferral, an admitted applicant must accept their offer by submitting a response in the application portal and pay any necessary deposits as required by their program. To be considered, deferral requests must be submitted on or before their respective deadlines to the SGH Director of Enrollment.

Deferrals must be submitted no later than August 1 of the academic year, any submissions after this deadline will require reapplication. Only one deferral is permitted per student, after that, a new application must be submitted.

Approval of your deferral is handled at the department level. Please note, supporting documentation may be required for approval.

Deferrals are granted only for a limited list of issues:

- Serious medical reasons
- Military leave
- Financial Concerns

Upon deferral approval, the Director of Enrollment will provide documentation and instructions to complete the request.

Late deferral requests may require reapplication, and the original offer could be withdrawn. Scholarship recipients requesting a deferral will be evaluated on a case-by-case basis to determine if the scholarship can be held for the next year. Students requesting a deferral who were not awarded a scholarship will be able to reinterview for scholarship consideration.

To request a deferral, admitted students should initiate the process by emailing the Director of Enrollment at the School. This communication must include one of the listed reasons for deferral above. Upon receiving the request, the director will review the request and if approved they will contact both the student and the appropriate departments to finalize the process. Students are encouraged to communicate promptly and clearly to facilitate a smooth deferral process if any of the listed conditions apply. Deferral requests of any kind submitted after the deadline will not be considered or approved and reapplication will be required.

Readmission

Students not enrolled in the School of Global Health for two consecutive semesters must reapply for admission. An application for readmission must be submitted to the Director of Enrollment Management and approved by the Faculty Admissions Committee. The applicant must meet all requirements in effect at the time of submission.

Enrollment Contact

Mahia Valle, MBA
Director, Communications and Enrollment Management
School of Global Health
Mvalle@mmc.edu

Cost of Attendance

Meharry Medical College
"Estimated" Budgets for Financial Aid- Global Health_Health Equity_Health Law Policy
2026-27 Academic Year

The following budgets embody what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Global Health. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.

COA Components	Monthly	GH - Yr 1 MS -HE/HLPM 8 months	GH - Yr 2 MS-HE/HLPM 8 months	GH - Yr 1 PhD-GHE/HLPM 8 months	GH - Yrs 2-3 PhD-GHE/HLPM 8 months	GH - Yr 4 PhD-GHE/HLPM 8 months
Direct costs - paid to the College						
Tuition		\$29,278	\$29,278	\$29,278	\$29,278	\$29,278
Fees		\$7,914	\$8,264	\$7,914	\$7,914	\$8,264
Indirect costs - Living expenses						
Books & Supplies		\$810	\$810	\$810	\$810	\$810
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100	\$16,800	\$16,800	\$16,800	\$16,800	\$16,800
Food (Monthly food allowance)	\$550	\$4,400	\$4,400	\$4,400	\$4,400	\$4,400
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$4,600	\$4,600	\$4,600	\$4,600	\$4,600
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$4,800	\$4,800	\$4,800	\$4,800	\$4,800
Miscellaneous*		\$3,216	\$3,900	\$3,216	\$3,900	\$3,900
2026-27 COA TOTALS	\$3,825	\$71,818	\$72,852	\$71,818	\$72,502	\$72,852
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance				
	\$1,500	Laptop Allowance (1st year only)				
	\$2,400	Loan fees for Year 2				
	\$216	Loan fees for Year 1				
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.						
Please note that credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.						
Tuition and the health insurance fee will be split evenly between both fall and spring semesters.						
Master's : HE- Health Equity, PhD: GHE -Global Health Equity, Master's and PhD : HLPM - Health Law Policy and Management						
First year admits: Programs beginning after July 1, 2026 will no longer be eligible to receive Graduate PLUS loan funding. Must secure private loan.						
Subject To Change						
2026-27 GH FA Budgets						

Meharry Medical College
"Estimated" Budgets for Financial Aid- Global Health_DHA_MPH
2026-27 Academic Year

The following budgets embody what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Global Health. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.						
COA Components	Monthly	DHA Year 1 10 months	DHA Year 2 11 months	MPH First Year 8 months	MPH Second Year 8 months	MPH Resident 4 months
Direct costs - paid to the College						
Tuition		\$28,000	\$28,000	\$29,278	\$29,278	\$14,640
Fees		\$7,914	\$8,264	\$7,914	\$8,264	\$150
Indirect costs - Living expenses						
Books & Supplies		\$1,014	\$1,114	\$810	\$810	\$0
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100	\$21,000	\$23,100	\$16,800	\$16,800	\$8,400
Food (Monthly food allowance)	\$550	\$5,500	\$6,050	\$4,400	\$4,400	\$2,200
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$5,750	\$6,326	\$4,600	\$4,600	\$2,300
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$6,000	\$6,600	\$4,800	\$4,800	\$2,400
Miscellaneous*		\$3,216	\$3,900	\$3,216	\$3,900	\$1,500
2026-27 COA TOTALS	\$3,825	\$78,394	\$83,354	\$71,818	\$72,852	\$31,590
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance				
	\$1,500	Laptop Allowance (1st year only)				
	\$2,400	Loan fees for Year 2				
	\$216	Loan fees for Year 1				
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.						
Please note that credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.						
Tuition and the health insurance fee will be split evenly between both fall and spring semesters.						
DHA- Doctor of Health Administration, MPH- Master's of Public Health						
First year admits: Programs beginning after July 1, 2026 will no longer be eligible to receive Graduate PLUS loan funding. Must secure private loan.						
	Subject To Change					
						2026-27 GH FA COA Budgets

The SGH Cost of Attendance includes the Cost of Attendance for the Ph.D. in Global Health Equity, Ph.D. in Health Law Policy and Management, MS of Health Equity, and MS of Health Law Policy and Management.

School of Global Health Curriculum

Master of Public Health, Epidemiology Track

Year 1 (24 credit hours)

- Epidemiology I (3)
- Biostats I (3)
- Health Behavior (3)
- Foundations in Public Health (2)
- Public Health Practice/Externship (1)
- Data Management (3)
- Environmental Health (3)
- Health Administration and Planning (3)
- Research Design (3)

Year 2 (21 credit hours)

- Applied Practice Experience (2)
- Integrated Learning Experience I (1)
- Required Elective (3)
- Required Elective (3)
- Elective (3)
- Applied Practice Experience (1)
- Integrated Learning Experience II (2)
- Required Elective (3)
- Elective (3)

Electives

- Epidemiology II
- Biostats II
- Epidemiology of Chronic and Infectious Disease

Master of Public Health, Public Health Practice Track

Year 1 (24 credit hours)

- Epidemiology I (3)
- Biostats I (3)
- Health Behavior (3)
- Foundations in Public Health (2)
- Public Health Practice/Externship (1)
- Data Management (3)
- Environmental Health (3)
- Health Administration and Planning (3)
- Research Design (3)

Year 2 (21 credit hours)

- Applied Practice Experience (2)
- Integrated Learning Experience I (1)
- Health Education and Promotion (3)
- Elective (3)
- Elective (3)
- Applied Practice Experience (1)
- Integrated Learning Experience II (2)
- Program Evaluation (3)
- Health Equities/Disparities (3)

Electives

- Health Education and Promotion
- Program Evaluation
- Racism and Health

Master of Science, Health Equity

Year 1 (19 credit hours)

- SGHC 500 Health Disparities and Health Equity (3)
- SGHC 501 Social, Mental, and Behavioral Health (3)
- SGHC 504 Political Determinants of Health (3)
- SGHC 502 Foundations in Health Policy/Law (3)
- SGHC 503 Introduction to Global Health (3)
- HEEQ 500 Biostatistics and Health Equity Research (3)
- SGHT 600 Master's Independent Goals Analysis (1)

Year 2 (18 credit hours)

- GLHE 712 A Needs Assessment Approach Using GIS and Community Mapping (3)
- HCOM 503 Crisis & Emergency Risk Communication (3)
- SGHX 602 MS Applied Learning Experience (3) ***
- GLHE 702 Global Disease Epidemiology and Control (3)
- Elective (3)
- SGHT 605 Health Equity Thesis Capstone (3)

Electives

- GLHE 707 Climate Change and Population Health (3)
- HCOM 500 Communicating to Achieve Health Equity (3)
- MHAD 511 Program Planning, Finance, Administration, & Evaluation (3)
- HCOM 508 Writing to Get Published (3)
-

Master of Science, Health Law, Policy, and Management

Year 1 (19 credit hours)

- SGHC 500 Health Disparities and Health Equity (3)
- SGHC 501 Social, Mental, and Behavioral Health (3)
- SGHC 504 Political Determinants of Health (3)
- SGHC 502 Foundations in Health Policy/Law (3)
- SGHC 503 Introduction to Global Health (3)
- HLPM 501 Legal Epidemiology
- SGHT 600 Master's Independent Goals Analysis (1)

Year 2 (18 credit hours)

- HLPM 701 Federal Health Policymaking from Legislation to Regulations to Interpretation (3)
- HLPM 503 Big Data, Emerging Technology & Policymaking (3)
- HLMP 704 Seminar in Health Policy: Using Secondary Data to Conduct Health Policy Research (3)
- HLPM 504 Governing Health (3)
- Communication Elective (3)
- SGHT 700 Health Policy Thesis (3)

Electives

- HCOM 500 Communicating to Achieve Health Equity (3)
- HCOM 508 Writing to Get Published (3)
- HCOM 507 Persuasive Policy Communication Seminar (3)
- HCOM 506 Policy Memo Writing for Decision-Makers (3)

Doctor of Philosophy, Global Health Equity

Year 1 (19 credit hours)

- SGHC 500 Health Disparities and Health Equity (3)
- SGHC 501 Social, Mental, and Behavioral Health (3)
- SGHC 504 Political Determinants of Health (3)
- SGHC 502 Foundations in Health Policy/Law (3)
- SGHC 503 Introduction to Global Health (3)
- HEEQ 500 Biostatistics and Health Equity Research (3)
- SGHT 900 Doctoral Independent Goals Analysis (1)

Year 2 (18 credit hours)

- GLHE 712 A Needs Assessment Approach Using GIS and Community Mapping (3)
- GLHE 707 Climate Change and Population Health (3)
- GLHE 702 Global Disease Epidemiology and Control (3)
- HCOM 503 Crisis & Emergency Risk Communication (3)
- Elective (3)
- Elective (3)

Year 3 (18 credit hours)

- GHLE 708 Advanced Global Health (3)
- GLHE 701 Global Health Diplomacy – Diplomacy in the Modern World (3)
- SGHT 901 Doctoral Research and Writing (6)
- SGHT 901 Doctoral Research and Writing (6)

Year 4 (18 credit hours)

- SGHT 901 Doctoral Research and Writing (9)
- SGHT 901 Doctoral Research and Writing (6)
- SGHT 902 Dissertation and Defense Global Health Equity (3)

Electives

- HCOM 500 Communicating to Achieve Health Equity (3)
- HCOM 508 Writing to Get Published (3)
- GLHE 700 Introduction to Humanitarian Emergencies: Embedding an Equitable Response (3)
- MHAD 511 Program Planning, Finance, Administration, & Evaluation (3)
- HLPM 700 Political Determinants of Health: Advanced Concepts & Global Applications (3)
- GLHE 713 Introduction to Negotiations and Practice (3)
- HLPM 706 The Influence of Power, Politics, and Policy on Global Health Practice (3)

Doctor of Philosophy, Health Law, Policy, and Management**Year 1 (19 credit hours)**

- SGHC 500 Health Disparities and Health Equity (3)
- SGHC 501 Social, Mental, and Behavioral Health (3)
- SGHC 504 Political Determinants of Health (3)
- SGHC 502 Foundations in Health Policy/Law (3)
- SGHC 503 Introduction to Global Health (3)
- HLPM 501 Legal Epidemiology (3)
- SGHT 900 Doctoral Independent Goals Analysis (1)

Year 2 (18 credit hours)

- HLPM 503 Big Data, Emerging Technology & Policymaking (3)
- HLPM 504 Governing Health (3)
- HLPM 704 Seminar in Health Policy: Using Secondary Data to Conduct Health Policy Research (3)
- HLPM 701 Federal Health Policymaking from Legislation to Regulations to Interpretation (3)
- Elective (3)
- Elective (3)

Year 3 (18 credit hours)

- HLPM 502 Policy Design and Delivery (3)
- HLPM 700 Political Determinants of Health: Advanced Concepts & Global Applications (3)
- SGHT 901 Doctoral Research and Writing (6)
- SGHT 901 Doctoral Research and Writing (6)

Year 4 (18 credit hours)

- SGHT 901 Doctoral Research and Writing (9)
- SGHT 901 Doctoral Research and Writing (6)
- SGHT 902 Dissertation and Defense Global Health Equity (3)

Electives

- HCOM 500 Communicating to Achieve Health Equity (3)
- HCOM 508 Writing to Get Published (3)
- HLPM 705 International Law and Global Justice (3)
- HCOM 506 Policy Memo Writing for Decision-Makers (3)
- HLPM 703 Applied Legal Epidemiology (3)
- GLHE 713 Introduction to Negotiations and Practice (3)
- HLPM 706 The Influence of Power, Politics, and Policy on Global Health Practice (3)
- HCOM 507 Persuasive Policy Communication Seminar (3)

Course Descriptions

MPH Course Offerings

GHPH 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 basic knowledge and its application in the experimental and non-experimental phases of health care administration and medical disciplines.

GHPH 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.

GHPH 76401 Foundations in Public Health - This hybrid course introduces public health theory and concepts, describing the scientific foundation of public health. It examines the purpose, history, organization, functions, activities, and outcomes of public health practice at the global, national, state, and local community levels. Prominent historical events of public health and current day debates will open the student to the evolution of public health. This course provides an overview of the cornerstones of public health: epidemiology, biostatistics, environmental health, behavioral and community health and health policy. At the conclusion of this course, the successful student will have an appreciation for public health theoretical concepts and the foundations by which public health cultivated into the comprehensive, applied health field it is today.

GHPH 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.

GHPH 71801 Public Health Practice/Externship I - This class intends to help students translate public health in the classroom, to public health as it is practiced in the public and private sectors. Students will sharpen the soft skills needed to work in the community and organizations, as well as develop a clear understanding of the elements of prevention and intervention. The class is the prerequisite for the Applied Practice Experience, field placement where students join units in various disciplines to affect health and wellbeing through the integration of acquired skills and competencies.

GHPH 72501 Health Behavior - The purpose of this course is to introduce 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.

GHPH 73001 Health Administration and Planning - 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.

MPH Core/Required Course Descriptions, continued

GHPH 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.

GHPH 70701 Environmental Health - This course is designed to survey those factors that impact upon the environment and human health. The student will be provided with a conceptual framework for the study, analysis and control of various environmental problems.

GHPH 80701 Applied Practice Experience - 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. Prerequisite: Public Health Practice

GHPH 80601 Integrated Learning Experience - The Integrated Learning experience (ILE) is an opportunity for MSPH students to synthesize and integrate knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional public health practice.

Master of Science and Doctor of Philosophy Foundational Courses

MSPH 210/SGHC 504 Political Determinants of Health (3 hours): This course introduces students to the political underpinnings of the health ecosystem, examining the fundamental causes and drivers of population health outcomes. By studying the political contexts of the health ecosystem, students will explore the interface of civic engagement, advocacy, government, law/policy, commercial interests, health reform, and health equity movements. By understanding the political determinants of health, their origins, and their impact on the equitable distribution of opportunities and resources, administration of power, and structuring relationships, health leaders and scholars will be better equipped to develop and implement actionable solutions to close the health gap including promoting, implementing, and sustaining effective public and private policies that can advance the needle in achieving health equity.

MSHE 300/SGHC 500 Health Disparities and Health Equity (3 hours): This course offers perspectives into the complex dimensions of health inequities and provides a critical examination of the factors that create, perpetuate, and exacerbate health inequities. This course focuses on contemporary theories, methods, and applications of health inequities research, interventions, and practice. Using a multicultural perspective, students will examine the historical, ethical, and legal issues that influence health disparities and health equity. Analyses of primary literature will be integrated throughout the course to facilitate discussion and provide examples of methodologies in the field.

MSHE 310/SGHC 501 Social, Mental, and Behavioral Health (3 hours): This course provides an overview of the social, psychosocial, behavioral, and sociocultural determinants of health. Specific emphasis on mental health--an often-overlooked topic--as well as the ecological model of community health problem analysis and development of equitable interventions provides concrete understanding. Course content organized around competencies (set out by the Association of Schools of Public Health) in the social and behavioral sciences includes selected social and behavioral theories and models used by public health professionals to plan, implement, and evaluate program strategies and policies for the improvement of community health. After successfully completing this course, students will be prepared to advocate for policy and systemic change for mental health and substance use treatment organizations as well integration with other health systems.

MSHP 200/SGHC 502 Foundations in Health Policy & Law (3 hours): This foundational course introduces the law governing the American public health and health care systems, specifically addressing the state, federal, and international health equity-focused laws and policies. Foundational readings in health policy and law introduce students to the theories, models, and conceptual frameworks used in the development, implementation, and analysis of health policies. Employs a multidisciplinary equity lens to inform thinking about the development, implementation and analysis of health policies that influence the public's health. Skills emphasized include critical reading and thinking, informed debate with respect for a range of opinions, and communication skills.

PGHE 300/SGHC 503 Introduction to Global Health (3 hours): Global Health Equity will allow students to gain an understanding of the environmental, social, cultural, political, economic and health system determinants of the health of individuals and population groups both in the US and abroad. The course will emphasize the frameworks of human rights and social justice and employ the Social Determinants/Ecologic model to examine health and health care systems in the US and around the world. In addition, students will be exposed to the major communicable and noncommunicable diseases posing a profound effect on health (especially within the developing world), and will also learn how socioeconomic and demographic differences can influence the burden of disease. Students will study health and health care disparities in the US and abroad, and endeavor to identify evidence-based interventions to address disparities at the personal, community, and policy levels.

Additional Course Offerings

GLHE 700 - Introduction to Humanitarian Emergencies: Embedding an Equitable Response (3 hours): U.S. History is replete with examples where emergency management responses to crises and disasters have rarely considered taking an equitable approach. For communities that are already under-resourced and historically marginalized, this injustice translates into an even greater loss when disaster strikes. Yet, this does not have to be the case. This course introduces the student to different types of humanitarian emergencies, humanitarian architecture and provides an overview of sectoral focus areas of humanitarian response. The course informs students of the environment in which these emergencies occur and how public health responses in various types of emergencies and contexts differ. This course not only explores mechanisms of preparedness, management of response to humanitarian emergencies, and long-term recovery, but it also emphasizes the importance of embedding equity into the equation, so that responses can become more just and fairer, especially for communities that are most in need.

GLHE 701 - Global Health Diplomacy – Diplomacy in the Modern World (3 hours): The Global Health Diplomacy course is intended to provide students with exposure to the development and practice of diplomatic relations when working abroad by creating pathways for students to apply their knowledge globally, advance health equity research through collaboration, and contribute to equitable and inclusive global health policy. Global health equity leaders must have a basic understanding the multi-level processes that shape and manage the global health policy environment and how to establish, build, and maintain relationships within the context of dynamic political environments as this is crucial for carrying out operations and reaching targeted goals regardless of the field of practice. Building on the foundational knowledge and skills from PGHE 400 Introduction to Negotiations and Practice, the course will be carried out over several modules and led by instructors with first-hand, real world experience in international affairs and global diplomacy. This course will also provide the opportunity for students to connect to health equity champions across the globe. Prerequisite: Introduction to Negotiations and Practice

GLHE 702 - Global Disease Epidemiology and Control (3 hours): In this course, students will learn the biologic basis of communicable and non-communicable diseases as a means of understanding pathogen identification, case determination, disease transmission, and possible interventions including vaccine development. In addition, students will review the methodologies employed to quantify and investigate outbreaks on a global scale, and understand disease dynamics. Students also receive an overview of response activities including communicating outbreak information as it evolves over the course of the outbreak, development of prevention and intervention activities and the governmental and public health policies (such as those that guide quarantine laws, drug development, emergency response, and so on) that can serve as guides to effective prevention. While mainly in lecture format, this course will also use global case studies in order to enhance understanding and analysis of in-depth investigations of key outbreaks providing students the necessary skill set to employ in the field. Prerequisite: Biostatistics and Health Equity Research

GLHE 708 - Advanced Global Health: Applications of Health Equity to Public Health and Healthcare Delivery (3 hours): This course will provide students with specialized topics in global health including environmental, climate,

cultural, historical factors, engage students in current health equity research. This course will culminate with pragmatic, student-led assessments of global health interventions and public policies in public health and health care systems, designed to identify creative and cost-effective solutions to some of the world's most pressing and complex health challenges. In seminar style, the course will use a combination of readings, guest speakers/experienced faculty members with expertise in global health and health equity, multi-media, in-class activities, and case studies from different countries that highlight diverse geographic contexts. This course will explore how transdisciplinary research findings are transferred into global policy and practice. Prerequisite: Introduction to Global Health & Health Equity

GLHE 712 - A Needs Assessment Approach using GIS and Community Mapping (3 hours): There are many ways to look at a community's health and its viability. Identifying a community's existing resources is one such way and is pivotal for advancing equity and health outcomes for all populations living within that community. This course focuses on one key subcomponent of the political determinants of health framework; the distribution of resources. Using Geographical Information Systems (GIS) as a tool, students will learn approaches to: quantitatively and qualitatively define public health problems; setting a community agenda by prioritizing distinct public health problems; engage the community in assessing local capacity to address those problems; visualizing those problems with Geographic Information Systems; and presenting the results of their assessment to audiences of decision makers and the public. Ultimately, real world application of this useful skill will aid students in advocating for their causes and communities.

GLHE 713 - Introduction to Negotiations and Practice (3 hours): Being a skillful negotiator is paramount for turning ideas into actions. While many may believe they are only useful in business, the truth is that strong negotiation skills can help us navigate through some of the toughest of circumstances, such as avoiding/resolving conflict, advancing in the workplace, and creating value. Negotiations are ubiquitous, permeating our daily interactions whether in business, international affairs, government, organizations, or our personal relationships. Thus, analytic and interpersonal negotiation skills are essential for creating value, operational capacity, legitimacy, and support for crucial decisions and collective action. At the same time, negotiators often confront resistance from well-resourced adversaries, information asymmetries, psychological biases, and constant change. Students need to be able to anticipate barriers to agreement, assess no-deal alternatives, diagnose and interpret underlying interests, in addition to applying evidence-based techniques to advance our interests and the interests of those who rely on us.

This course is designed to introduce students to the fundamentals of negotiation analysis and practice. Prerequisite: Global Health Diplomacy – Diplomacy in the Modern World

HEEQ 500 - Biostatistics and Health Equity Research (3 hours): The ability to read, understand, plan, and conduct research is essential to anyone whose work will impact public health. This core course covers methods for the organization, management, exploration, and statistical inference from data derived from multivariable regression models, including simple and multiple linear, logistic, Poisson and Cox regression models. Students apply these concepts to two or three public health data sets in a computer laboratory setting using SPSS and STATA statistical software. Topics covered include generalized linear models, product-limit (Kaplan-Meier) estimation.

HCOM 500 - Communicating to Achieve Health Equity (3 hours): In recent years, the role of social and mass media has had an increasing impact on public health and health outcomes with often seen negative results. In this course, the use of mass communication and social media is turned around and viewed as a tool for promoting health, both domestically and internationally. The course examines the role of media in shaping a social, political, and cultural environment that affects the public health, and then reviews a range of mass media strategies available to the practitioner--public communication campaigns, social marketing, public relations, and media advocacy. Students discuss the strengths and limitations of each approach and gain experience in applying these strategies to specific public health problems. Students work in groups on a final project in which they develop and present a proposal for a plan for a health promotion initiative that uses mass media.

HCOM 503 - Crisis & Emergency Risk Communication (3 hours): Responding to a crisis is nothing new. With our increasingly fast-moving news cycles and social media echo chamber, a small crisis can grow exponentially in a relatively short period of time, potentially damaging the reputation and brand of a leader, governmental entity, individual, nonprofit or company. And it can shape what happens in regulation, legislation and public policy. The key to crisis communications is to anticipate and plan for it before it happens – and to manage it in such a way that it minimizes the reputational damage and possibly enhances it. This course focuses on communication during emergencies, such as environmental disasters, mass shootings, disease outbreaks, food and drug safety incidents, etc. Students learn core principles in Crisis and Emergency Risk Communication. Global case studies illustrate best

practices and pitfalls, as students prepare for the challenges of communicating in a variety of scenarios, across numerous channels, with diverse target audiences. This course offers students a better understanding of how to manage communications in various crisis situations as well as identify audiences, frame debates, develop messages and implement strategies.

HCOM 506 - Policy Memo Writing for Decision Makers (3 hours): This course will strengthen students' skills as policy writers, learning to write with the proficiency, confidence, clarity, and modes of persuasion necessary for professional policymaking. It will increase knowledge and skills necessary for success in high-level policymaking careers. The course highlights modes of analysis, persuasive arguments, and recommendations that turn research and advocacy into actionable policies, and teach the strategies, techniques, and production habits of highly skilled policy writers.

HCOM 507 - Persuasive Policy Communication Seminar (3 hours): Policy advocates at all levels make progress by sharing a vision effectively. In this core course, students learn the theory and practice of persuasive communication. Readings and cases explore the interplay between communicating and policy making. Students will learn to make strong arguments, employ evidence effectively, and build professional writing skills that will enable them to communicate across cultures. Through assignments designed to strengthen written arguments (policy blogs) and public speaking (policy presentations), students have multiple opportunities to practice these essential skills, while also working in groups to build their abilities to communicate as part of a team. Prerequisite: Foundations in Health Policy/Law

HCOM 508 - Writing to Get Published (3 hours): Publication is a key career-building achievement, and essential for your work and ideas to make an impact. This course provides an understanding of effective writing techniques that will set your work apart from the rest, whether you are writing books, policy documents, op-eds, or articles. Students also learn the essential components of a successful book proposal and what authors need to know about how the publishing industry works. In order to successfully complete the course, students will demonstrate their new skills by crafting a high-quality book proposal. Students will be expected to complete several short-written assignments, building up to one longer written piece. Throughout the course, a series of case studies will be used for students to compare and contrast the different styles of writing and to identify varying article structure. The course will also invite guest lecturers from reputable publishers such as Johns Hopkins University Press, APHA Press, Springer Publishing, Health Affairs, and JAMA.

HLPM 502 - Policy Design and Delivery (3 hours): This course will focus on developing the skills and frameworks that health equity leaders need to begin planning and implementing a comprehensive response to a complex public policy problem. Policy Design and Delivery (PDD) will teach students the skills necessary to address a wide range of issues and to craft options for change. It is important to assess a community for their existing resources so this course will provide a basic introduction to leveraging technologies such as GIS for community mapping. Grounded in theory, the course will also be taught using an immersive case-based methodology. Students will learn to use and apply policy tools and frameworks to hypothetical cases where no current answer exists and see how real-world examples were solved, taught by leading experts with personal experience. Throughout the course, students will build upon their policy-making toolkit to develop skills in leadership, team-building, briefing and writing for policymakers, and effective project management. Prerequisite: SGHC 502 Foundations in Health Policy/Law; SGHC 504 Political Determinants of Health

HLPM 503 - Big Data, Emerging Technology & Policymaking (3 hours): This course exposes students to the increasing power of big data in driving policy changes. Policymakers and influencers in the 21st century, from members of Congress to analysts to advocates and executives need to be equipped with the necessary skills to navigate nuanced issues at the intersection of technology and governance. Those who have first-hand experience with programming, data, software development and management methods, responsible artificial intelligence, open source collaboration, and technology innovation are better prepared to competently navigate these issues. This course will provide an intensive understanding of data curation, reporting and utilization in the context of government and policy to build essential core technology and data equity knowledge and skills. The course is also designed to prepare students who wish to pursue further learning to overcome the initial barrier to learning programming and more efficiently direct future efforts. Prerequisite: Foundations in Health Law & policy; Political Determinants of Health

HLPM 504 - Governing Health (3 hours): The course includes four parts. The first part examines ethical frameworks that involve various approaches to medical and public health ethics. The second part presents an alternative theory of justice and health, the health capability paradigm (HCP), grounded in human flourishing. The third part explores

domestic health policy applications, including equal access, equitable and efficient health financing and insurance, rising costs and allocating resources. The fourth and final part of the course investigates domestic health reform, particularly a normative theory of health policy decision making grounded in political and moral legitimacy. Prerequisite: Political Determinants of Health; Health Disparities and Health Equity

HLPMP 700 - Political Determinants of Health: Advanced Concepts & Global Applications (3 hours): In this advanced course, students will use critical thinking skills to make real world connections to political determinants that have influenced medical, public health, behavioral health, and general health outcomes for both domestic and global populations. Students will be required to make comparative analyses of political contexts of public health issues across various governments globally, exploring the interface of government, law, economic interests, and social movements for public health at a much deeper level. Didactic materials for this course will use traditional academic literature as well as grey literature - including modern media sources (books, magazines, newspapers), to provide a "round the world" perspective on ongoing health issues affecting each governing state. Students will be required to focus on one health topic of interest and monitor the outcome of that health topic in a designated foreign country of choice. Presentation on the complex analysis of the chosen health topic through the political determinants of health lens will be required by the end of the course. Prerequisite: Political Determinants of Health

HLPMP 701 - Federal Health Policymaking from Legislation to Regulations to Interpretation (3 hours): This course is focused on federal health policy-making institutions and the technical and strategic issues one must consider when developing health policy. The institutional focus will be on congressional, executive, and judicial branches policy development, and rule-making, and interpretation process. Congressional governance, including the major committees of jurisdiction, in the House and Senate, the Congressional Budget office, the Government Accountability and the Congressional Research Service will be explored. This course will also discuss the role of advocacy and special interest groups in influencing policy. The Executive Branch will allow students the opportunity to deepen their understanding of the regulatory process, the role of the Office of Management and Budget, White House Domestic Policy Council, and the interplay between regulations, Congress and the courts. Case studies in health policy successes and failures will be used to examine lessons on legislative and regulatory strategies specifically for health equity focused policy agendas. Examples include the battle over the Affordable Care Act, Genetic Information Non-discrimination Act, Mental Health Parity Act, Medicare trust fund solvency, Drug Pricing reform, the role of Medicare advantage, work requirements for Medicaid, the Medicare Catastrophic Act, etc.

HLPMP 703 - Applied Legal Epidemiology (3 hours): This course provides an advanced understanding of legal epidemiology, the scientific study of and deployment of law as a factor in the cause, distribution, and prevention of disease and injury in a population. This course will provide students an opportunity addresses key health equity research gaps from an intersectional, social-ecological, holistic and integrated approach, and leverage new tools to reduce health inequities and advance health equity, effectively demonstrating the causal link between political determinants and population health outcomes. Through the successful completion of the course, participants will be able to identify, apply, and implement statistical and legal skills, methods, and tools that can be used to advance public health and improve the delivery of legal and public health services. Prerequisite: Legal Epidemiology

HLPMP 704 - Seminar in Health Policy (3 hours): Using Secondary Data to Conduct Health Policy Research (3 hours): Provides a small class-size, doctoral-focused experience and examines some of the most common data sources used in the field to study health policy and management research topics. Emphasizes secondary data sources and discusses: (1) data structure and challenges with conducting research with secondary data; (2) developing research questions and testable hypotheses using these data sources; (3) strategies for data cleaning, work flow management, and replication; (4) data protection, data sovereignty, and storage related concerns; and (5) orally communicating strengths and weaknesses of datasets in the context of research talks. Exposes doctoral students to faculty research projects and the specific datasets being used to conduct health equity research. Prerequisite: Big Data, Emerging Technology & Policymaking

HLPMP 705 - International Law and Global Justice (3 hours): This course provides students with an opportunity to understand the role of international law as a tool for promoting global health equity and justice. This course will explore diverse global human rights and social justice issues impacting low-income, middle-income, and high-income countries, especially marginalized, vulnerable, and under-resourced population groups. From issues impacting the health and well-being of migrants and climate refugees to trade systems and reparations, this course will provide critical examination of legal systems and the laws affecting the rights and privileges of minoritized groups around the world. This course will use a health justice and a global justice approach to assess inequities in health and society.

The central goal of the course is to familiarize students with analytical and policy tools to enable them to think and act critically when drafting, implementing, or responding to policies related to international law.

HLPM 706 - The Influence of Power, Politics, and Policy on Global Health Practice (3 hours): This course provides a basic understanding of structures of authority and power; economics and political systems; role and limits of international organizations in development; current concepts of development and the political process; state collapse; and the origins of conflicts. While emphasis is placed on developing countries, the course will make comparisons across regional political trends and forces that affect health of populations and development of health services in places such as in Asia, Africa, Latin America, and Europe.

MHAD 507 - Clinical Research Trials Science and Management (3 hours): This course is designed to provide students with a comprehensive understanding of the principles and practices involved in conducting clinical research trials. In this course, students will learn about the entire lifecycle of a clinical trial, from the initial planning and design to the final analysis and reporting of results. They will gain a deep understanding of the ethical considerations, regulatory requirements, and best practices for conducting clinical trials. The course will cover a wide range of topics, including study design, participant recruitment and enrollment, data collection and management, statistical analysis, and safety monitoring. Students will also learn about the role of various stakeholders in clinical trials, such as investigators, sponsors, ethics committees, and regulatory authorities. Students will have the opportunity to apply their knowledge through case studies and practical exercises. They will learn how to develop a research protocol, create data collection forms, analyze clinical trial data, and interpret the results. They will also learn how to navigate the regulatory landscape and ensure compliance with ethical guidelines and regulations.

MHAD 510 - Leadership and Organizational Behavior (3 hours): This course examines moral leadership in the context of professional public service largely through the use of case-based studies, media, and grey literature. The course will focus on cultivating proficiency in a range of skills that together help to ground moral action. These skills include: 1) accurately perceiving the moral dimensions of situations that arise in public service, 2) adequately weighing moral tradeoffs that have to be made as part of strategic action, and 3) effectively putting into reflective equilibrium, the verdicts of the heart and those of the head. Additionally, the course promotes 4) the capacity to entertain different moral perspectives, that is, the ability to temporarily live in another person's moral universe and see the world through their eyes. The ability to do this well is an essential component to successfully practicing the skills needed for virtuous action. Prerequisite: None

MHAD 511 - Program Planning, Finance, Administration, and Evaluation (3 hours): This course presents methods for the identification of population-based needs for public health intervention, development of programs to meet those needs, and evaluation of the effectiveness of these public health interventions. The course integrates several knowledge and skill areas including: research methods, epidemiology, biostatistics, proposal writing, budget planning, project management, and program evaluation.

SGHT 600 - Master's Independent Goals Analysis (1 hour): Develop a master's thesis/capstone academic plan through discussions with faculty advisor resulting in the development of a topic and written document called the Individual Development Plan. Review course tracking sheet based on skills and methods student plans to learn. The IDP is a living document that is part of the student's self-assessment and departmental annual review. Supports the student's successful performance in the program and prepares students for their intended future career. Students will be able to: assess current skills, interests, and strengths; develop skills to meet academic and professional goals; communicate and collaborate with supervisors, advisors, potential employers, and mentors about evolving goals and related skills; receive written feedback from professor and advisor on the student's academic progress.

SGHT 605 - Health Equity Thesis/Capstone (3 hours): All students must complete a thesis or capstone project in order to graduate from the MS Health Equity program. As the culminating experience, this course serves as an independent, theory-based or practice-based inquiry in which the student applies knowledge and skills acquired during the Health Equity program to the scholarly study of a complex health issue. For the thesis option, the student presents a complex issue with background information and must defend the urgency in addressing the issue. The student will then present the analysis, explanation(s), or assertion(s) that they are making about the topic. The student will be expected to make an oral presentation in addition to submitting their thesis in writing. For the capstone option, the student will select a topic related to a complex health issue based on an experience (usually through the GHEX 100 MS Applied Learning Experience). Similarly, the student will provide an analysis on the topic, including background information, landscape analysis, as well as any carried-out interventions or proposed interventions that may provide a solution to the issue presented. The student will also be required to submit the project in a written format and provide

an oral presentation. For both formats, students are expected to use quantitative, qualitative or other methodologies, presented in a traditional style or manuscript style. The student and advisor will decide on thesis statement or capstone project at the beginning of the semester. Prerequisite: All foundation and core courses must be completed or taken concurrently

SGHT 700 - Health Policy Thesis (3 hours): All accelerated students in the Master of Science in Health Policy must complete a thesis project. This project is a rigorous academic requirement; as the culmination experience in the Master of Science in Health Policy program, it is an independent, theory-based inquiry in which the student applies knowledge and skills acquired during the Health Policy program to the scholarly study of a public health or health care problem. In SGH, the thesis project may take the form of either a Special Studies Project (e.g. a deliverable for an organization) or a Research Project (e.g. systematic review, analysis of primary or secondary data) using quantitative, qualitative or other methodologies and presented in a traditional style or manuscript style. Prerequisites: All Foundation and Core Courses taken or concurrently completing.

SGHT 900 Doctoral Independent Goals Analysis (3hours): Develop a doctoral academic plan through discussions with faculty advisor resulting in the development of atopic and written document called the Individual Development Plan. Review course tracking sheet based on skills and methods student plans to learn. The IDP is a living document that is part of the student's self-assessment and departmental annual review. Supports the student's successful performance in the program and prepares students for their intended future career. Students will be able to: assess current skills, interests, and strengths; develop skills to meet academic and professional goals; communicate and collaborate with supervisors, advisors, potential employers, and mentors about evolving goals and related skills; receive written feedback professor and advisor on the student's academic progress.

SGHT 901 Doctoral Research (9 hours): This course is intended for students to complete their independent research and writing in preparation for their doctoral thesis and defense. The 9 credit hours are spread over 3 semesters at 3 hours per semester beginning in year 2 of the doctoral program.

SGHT 902 Dissertation and Defense (3 hours): The dissertation defense course consists of the last 3 credit hours students will take in their final semester. It is designed to finalize and prepare the student for their final oral examination that evaluates a student's dissertation and its relationship to their field of study. This is the last formal step prior to a student submitting their dissertation manuscript and receiving their doctoral degree.

GHPH 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 basic knowledge and its application in the experimental and non-experimental phases of health care administration and medical disciplines.

GHPH 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.

GHPH 76401 Foundations in Public Health: This hybrid course introduces public health theory and concepts, describing the scientific foundation of public health. It examines the purpose, history, organization, functions, activities, and outcomes of public health practice at the global, national, state, and local community levels. Prominent historical events of public health and current day debates will open the student to the evolution of public health. This course provides an overview of the cornerstones of public health: epidemiology, biostatistics, environmental health, behavioral and community health and health policy. At the conclusion of this course, the successful student will have an appreciation for public health theoretical concepts and the foundations by which public health cultivated into the comprehensive, applied health field it is today.

GHPH 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.

GHPH 71801 Public Health Practice/Externship I: This class intends to help students translate public health in the classroom, to public health as it is practiced in the public and private sectors. Students will sharpen the soft skills needed to work in the community and organizations, as well as develop a clear understanding of the elements of prevention and intervention. The class is the prerequisite for the Applied Practice Experience, field placement where students join units in various disciplines to affect health and wellbeing through the integration of acquired skills and competencies.

GHPH 72501 Health Behavior: The purpose of this course is to introduce 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.

GHPH 73001 Health Administration and Planning: 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.

Grading Policy

- **Academic Standing:** A student must maintain a grade point average (GPA) of 3.0 to remain in good academic standing. A student whose GPA falls below 3.0 may be dismissed or given up to one calendar year to raise his or her GPA back to 3.0; during this period, the student is said to be on academic probation.
- Any student with a grade less than a B at midterm will receive a Student Improvement Plan that will be signed off by the course faculty, student, and administrator to address how the student plans to bring their grade up.
- **Academic Probation:** A report is generated each semester to identify students' performance. If progress is considered unsatisfactory, a student will be informed of this in a letter from the School of Global Health with a copy to the Associate Dean of Curriculum Development and Academic Affairs. The Associate Dean of Curriculum Development and Academic Affairs will meet with the student to develop a written plan of action to govern the student's success in the program. A student whose GPA does not reach 3.0 by the end of a designated period of academic probation may be dismissed from the School of Global Health 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 School of Global Health.
- In any academic year, students must pass 70% of coursework (21 hours) with a grade of "B" or higher. A graduate student may become academically ineligible to continue in the School of Global Health 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 a SGH degree program:
 - (1) receives a grade of "C" in the foundation and core courses, it must be repeated, and a grade of "B" or better must be received, (if not, a student may be placed on probation; if this is the case, a written plan of action is to be given to the Chair signed by the student a week after the student is placed on probation),
 - (2) receives one grade of "F" will result in automatic probation (a written plan of action is to be given to the Program Director signed by the student a week after a student is placed on probation), and
 - (3) receives two grades of "F" will automatically be dismissed when his/her GPA is below 3.0 that semester. When a course is repeated, the first grade will remain on the student's transcript and be calculated as part of the student's grade point average. Students can repeat a course only once.

Transfer Credit:

At this time, the School does not accept transfer credits from other academic programs or institutions.

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. Their educational experiences are directed towards serving the underserved communities, focused on health conditions, and other determinants of health that affect minority populations. The students are partnered with others at Meharry Medical College engaged in this mission.

The School of Global Health is a caring and supportive community that encourages professionalism, excellence, and 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, computational resources, financial aid, and have access to the expertise of faculty 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 dissertation committee, thesis or capstone 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 student(s) 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.

Examinations and Grades

Grades for courses taken for graduate credit are A, B+, B, C+, C, F, S, U, IP and I. Grade point averages (GPA) are calculated on the basis of A=4, B+=3.5, B=3, C+=2.5 C=2, F= 0. All final grades shall remain on the student's permanent transcript.

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.

Adding or Withdrawing from Course(s)

If a student wishes to add or drop a course(s), he or she can do so via Workday during the designated add/drop period noted on the academic calendar. The student is first required to get the approval of their respective department chairperson and/or academic advisor prior to the add/drop period, and following advisement and approval, will then receive a unique registration pin number to use to add or drop a course(s) via Workday. A student may add a course prior to the end of the 3rd week of classes during the Fall and Spring semesters, and prior to the end of the 1st week of classes during the summer semester. 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 semester. 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 SGH 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 SGH 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 the SGH or has not registered for two consecutive semesters, he/she must also reapply to the School. Provided the student left in good standing, in these situations, he/she needs only to fill out a new application, 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 SGH Admissions Committee, which will then make a recommendation to the Dean.

A student in the PhD 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 PhD 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 SGH 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 given by these Offices. 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 SGH 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, June, October, and December. Formal commencement exercises are held in May.

School of Global Health Academic Calendar 2026-2027



SCHOOL OF GLOBAL HEALTH

Academic Year 2026-2027	
Monday, May 4, 2026	Fall Term including Externship Begins (2026-27 AY MPH 2)
Monday, June 1, 2026	Fall Term including Externship Ends (2026-27 AY MPH 2)
Friday, June 3, 2026 - Friday, June 19, 2026	3rd Year Global Health Equity Students Optional International Travel (Subject to change*)
Thursday, June 18, 2026	Returning Students Fall 2026 Registration
Saturday, July 4, 2026	4th of July Holiday*
Monday, July 6, 2026 - Friday, July 10, 2026	3rd Year Health Law, Policy, and Management Students Optional Domestic Travel (Subject to change*)
Wednesday, July 15, 2026 - Thursday, July 16, 2026	SGH Faculty Semi-Annual Retreat
Friday, July 24, 2026	Grades Due in Banner/Registrar's Office (Summer Session)
Thursday, August 6, 2026 - Friday, August 7, 2026	First Year Students Orientation, Registration, and Professional Pinning Ceremony
Monday, August 10, 2026	Classes Begin
Monday, August 10, 2026	DHA Fall Term I Classes Begin
Monday, September 7, 2026	Labor Day Holiday*
Thursday, September 17, 2026	Constitution Day
Wednesday, September 23, 2026	Student Research Day -Student Presentations (Classes are in session.)
Sunday, October 4, 2026	DHA Fall Term I Classes End
Monday, October 5, 2026	Convocation
Monday, October 5, 2026	DHA Fall Term II Classes Begin
Friday, October 9, 2026	DHA Fall Term I Grades Due



SCHOOL OF GLOBAL HEALTH

Monday, November 2, 2026	Spring 2027 Registration
Friday, November 20, 2026	Fall Semester Ends
Friday, November 27, 2026	Grades Due in Workday/Registrar's Office
Thursday, November 26, 2026 & Friday, November 27, 2026	Thanksgiving Holiday*
Sunday, November 29, 2026	DHA Fall Term II Classes End
Friday, December 4, 2026	SGH SAPP for Continuing Students
Friday, December 4, 2026	DHA Fall Term II Grades Due
Monday, January 4, 2027	Spring Classes Begin
Monday, January 4, 2027	DHA Spring Term I Classes Begin
Friday, January 13, 2027	ML King Remembrance Program
Monday, January 18, 2027	ML King Jr. Holiday*
Friday, January 29, 2027	Written Comprehensive Exam (First Attempt)
Sunday, February 28, 2027	DHA Spring Term I Ends
Monday, March 1, 2027	DHA Spring Term II Begins
Friday, March 5, 2027	DHA Spring Term I Grades Due
Monday, March 8, 2027 - Friday, March 12, 2027	Spring Break



SCHOOL OF GLOBAL HEALTH

Monday, April 3, 2027	Continuing Students Fall 2026 Registration Starts
Friday, March 26, 2027	Good Friday – Meharry Holiday*
Wednesday, April 14, 2027	APE/ILE submission or Comprehensive Exam begins for May Graduation
Wednesday, April 21, 2027	Last Day to MPH/MS Publicly Defend Thesis/Capstone for May Diploma
Wednesday, April 21, 2027 & Thursday, April 22, 2027	Spring 2026 In-Residence Session (all students)
Friday, April 23, 2027	Classes End for May Graduates
Friday, April 23, 2027	Last Day to Submit Thesis/Capstone for May Diploma
Sunday, April 25, 2027	DHA Spring Term II Ends
Monday, April 26, 2027 - Sunday, May 2, 2027	DHA Spring Break
Tuesday, April 27, 2027	Last Day to Submit APE/ILE Portfolio or Complete
	Comprehensive Exam for May Graduation
Thursday, April 29, 2027	Classes End for Continuing Students
Thursday, April 29, 2027	Grades Due in Banner/Registrar's Office for May Graduates
Friday, April 30, 2027	SGH SAPP for Graduates and Continuing Students
Friday, April 30, 2027	Spring Semester Grades Due in Workday/Registrar's Office for Continuing Students
Friday, April 30, 2027	DHA Spring Term II Grades Due



SCHOOL OF GLOBAL HEALTH

<i>Monday, May 3, 2027</i>	DHA Summer Term I Begins
<i>Friday, May 14, 2027</i>	SGH Hooding of Graduates
<i>Saturday, May 15, 2027</i>	Commencement
<i>Monday, May 31, 2027</i>	Memorial Day Holiday*
<i>Monday, June 7, 2027</i>	Fall Term including Externship Begins (2026-27 AY MPH 2)
<i>Friday, July 16, 2027</i>	Externship Experience Ends (2026-27 AY MPH 2)

School of Graduate Studies

Administration

Merry Lindsey, PhD, Dean
Amos M Sakwe, PhD, MSCI, Assistant Dean for Academic Affairs
Nicolle Patterson, MS, Assistant Dean for Student Affairs
Lisa Johnson, MBA, Associate Dean, Director of Strategic Initiatives
Michelle Steele, EdD, Chair, Department of Applied Education
Allyson Fleming, EdD, Program Director, Applied Education Program
Pamela Martin, PhD, Chair, Department of Biomedical Sciences
Amos Sakwe, PhD, Assistant Dean, Academic Affairs
Melanie Ragin, PhD, Senior Associate Dean
Pius N. Nde, PhD, Program Director, PhD Program
Tultul Nayyar, PhD, MSCI, Program Director, Master of Health Sciences Program
Amadou Gaye, PhD, Chair, Department of Integrative Genomics and Epidemiology
Michelle Drumgold, MSPH, MSPAS, PA-C, Chair, Department of Physician Assistant Sciences and
Program Director, Physician Assistant Sciences Program

Graduate Studies Education at Meharry

The School of Graduate Studies (SOGS) houses the masters programs in Clinical Investigation (MSCI), Education, Healthcare Leadership (MEd), Health Sciences (MHS), and Physician Assistant Sciences (MPAS). SOGS also houses the PhD Program in Biomedical Research and the Doctorate in Education, Healthcare Leadership (EdD) Program. SOGS is recognized as a valuable national resource for educating PhDs in the Biomedical Sciences. For the past 10 years, Meharry has conferred 53.4% of all the PhD degrees awarded nationally to African Americans in 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.

SOGS is housed in the West Basic Sciences Building (WBSB). SOGS space includes seminar rooms, large lecture halls, conference rooms, offices, and research laboratories.

History of the School

The SOGS 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. This led to the PhD program that was established in 1972, and a MD/PhD program in 1982. The PhD program has graduated more than 300 PhDs and currently is a top producer of African-American PhDs in the Biomedical Sciences in the U.S. The Master of Public Health program at Meharry Medical College was established in 1974 and graduated its first class of one student in 1978. The MPH program is now part of the School of Global Health. The Master of Science in Clinical Investigation program, established in 2004, has graduates who are at the forefront of clinical and translational research. A Health Policy Certificate program was established in 2010 as a collaborative effort between the SOGS and the Robert Wood Johnson Foundation Center for Health Policy. The

Master in Health Sciences program was established in 2012 as a collaborative effort between the SOGS and the Medical and Dental Schools to enhance the academic credentials of students applying to professional degree programs. The Master of Physician Assistant Sciences (MPAS) enrolled its first class of students in January 2023. The SOGS has four departments to house the various programs. This includes the Department of Biomedical Sciences for the MHS and PhD Programs, the Department of Physician Assistant Sciences for the MPAS Program, the Department of Integrative Genomics and Epidemiology, and the Department of Applied Education for the Master in Education (MEd) and Doctor in Education (EdD) programs with emphasis on Healthcare Leadership.

Mission of School

The mission of the School of Graduate Studies is to advance knowledge through high quality education and impactful research to enable our graduates to work across biomedical and healthcare settings, with an emphasis on eliminating health disparities.

Objectives of our Academic Programs

Upon completion of the Graduate Program, our graduates will:

- Know current biomedical science, and their historical context, with special emphasis on the diseases and conditions that affect underserved communities.
- For the PhD Program, our students will be prepared to conduct original research and design appropriate experiments and think scientifically and analytically.
- For the PA Sciences Program, our students will be experts in clinical sciences, work collegially; communicate effectively verbally, in writing, and graphically and practice the highest ethical and professional standards.
- Our graduates of the Master in Health Sciences program will have knowledge, skills and training to understand, address and inform health problems and issues faced by underserved populations as well as be more competitive for admission into health professional schools.
- Our graduates in applied education programs will be experts in organizational leadership, curriculum development, and educational research.
- Our graduates will be creative and confident in exploring new areas and opportunities.

Research

The goal of the training programs in the SOGS is to translate knowledge from the bench (PhD program) to the bedside (Master in Clinical Investigation and Master in Physician Assistant Sciences) and provide healthcaring leadership training. Research is the vehicle that supports training in all of these programs. The PhD program is 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, Retinopathy, Cardiometabolism, Microbiology and Immunology, 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 addressing 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 (PhD) 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 emphasis in biochemistry, molecular biology, cancer biology, cardiovascular sciences, microbiology and immunology, neuroscience, pharmacology and physiology. Beginning with the 2024/2025 academic year, a new PhD curriculum was implemented with emphasis on early development of critical thinking and writing skills and timely graduation of our PhD students.

The doctoral program is divided into core, content expertise, and dissertation phases. The core phase occupies the first semester of study; all students enroll in the core curriculum course. This course includes the fundamental concepts of biochemistry, cell and molecular biology, physiology, and genetics, with emphasis on applying these concepts to cardiovascular disease, cancer biology, and infectious disease, and early introduction of experimental design, project management, and statistical applications. The students also participate in laboratory rotations and attend lectures on scientific communications, and bioethics.

During the content expertise phase, students complete an advanced course targeted at their dissertation topic area and begin their research. They also learn grant writing and prepare F31 or similar grant applications. The content expertise phase ends when the student passes the comprehensive examination, thereby designating the student a candidate for the PhD degree. Students must be candidates for the degree no later than the fall semester of their third year. During the dissertation phase, the student completes the research begun during the content expertise phase and writes a dissertation on their research.

In order to be granted the doctoral degree, the student must either publish or have accepted for publication a manuscript as first author in a peer-reviewed journal. The Candidate will present a public seminar on the dissertation research and is required to pass the oral examination designed to test his or her knowledge of the methodologies and findings of the dissertation project. In addition, a formatted copy of the written document must be submitted to the SOGS and published via ProQuest Dissertations and Theses, an online database of dissertations and theses.

Combined Doctor of Medicine (MD)/PhD Program

The MD/PhD program is offered jointly by the School of Medicine and the SOGS. 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 will begin 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 reenter their medical studies and complete the School of Medicine curriculum. Students receive the MD and PhD degrees concurrently once both programs are successfully completed.

Combined Doctor of Dental Surgery (DDS)/PhD Program

The DDS/PhD program is offered jointly by the School of Dentistry and the SOGS. This program trains clinical and research professionals seeking to identify and solve significant problems in oral health. Successful completion of the program leads to the DDS and PhD degrees.

Students considered for admission to the combined degree program must meet the admission requirements of both the dental and graduate schools. Students enrolled in the DDS/PhD program matriculate in the SOGS for the first two years of their training. After successful completion of graduate level courses, and passing the candidacy exam, the students enter the dental program. After completing the dental program, the students will return to the Graduate School to complete their research, publish a manuscript, and successfully defend a dissertation for completion of the PhD degree. Students receive the DDS and PhD degrees concurrently once both programs are successfully completed.

Master of Science in Clinical Investigation (MSCI) Program

The Clinical Research Education and Career Development (CRECD) program at Meharry Medical College offers a two-year fellowship for Physicians and other doctoral-level healthcare professionals leading to a Master of Science in 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 a research trial, analyze the data, present a seminar and write a research paper on the research conducted during the training.

Master of Health Sciences (MHS) Program

The Master of Health Sciences Program is a 30 credit pre-professional Master's Degree program designed for students who desire to subsequently enroll into a professional degree program. The program is highly intense in its coursework and 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 (School of Medicine, School of Dentistry etc.), successful matriculation in this program will enhance competitiveness for admission into such schools throughout the country.

Master of Physician Assistant Sciences (MPAS)

The Master of Physician Assistant (PA) Sciences Program is offered by the School of Graduate Studies. The PA Sciences Program is dedicated to increasing the number of trainees from underrepresented groups in medicine (URiM) into the PA profession. The goals of the program are to provide a curriculum that equips students with the ability to demonstrate cultural humility, to provide evidence-based and compassionate care to all patients, and to foster a commitment to community service in underserved populations, through equity, justice, and lifelong learning.

The PA Sciences Program, which spans 28-months, will consist of four (4) semesters of didactic training, beginning with basic sciences courses and ending with pre-clinical courses in preparation for the clinical phase of the program. During the clinical phase of the program (three semesters), students will complete seven core rotations, one elective rotation, a summative exam, and a six-week Applied Learning Experience (ALE) course where they will complete their group

Capstone Project (manuscript and oral presentation). The program will culminate with a diverse cohort of students from racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.

Master of Education (MEd) Program

The MEd in Healthcare Leadership is a 30-credit, asynchronous program designed for emerging leaders in healthcare education and workforce development, with no residency requirement. This program integrates foundational principles of adult learning, curriculum design, and organizational leadership with practical applications in healthcare settings. Through a structured curriculum of core courses, specialized electives, and a capstone project, students develop the skills needed to lead educational initiatives, manage professional development programs, and drive organizational change in healthcare institutions. Students complete 18 credits of core coursework in adult learning, curriculum design, program evaluation, organizational behavior, leadership communication, and research methods. An additional 6 credits cover professional development and workforce leadership topics. A 6-credit capstone experience, comprising a practicum and final project, provides hands-on opportunities to apply learning to real-world healthcare challenges. The curriculum ensures active engagement with the material and practical skill application. This program equips you with the knowledge, skills, and practical experience needed to excel in leadership roles within the healthcare sector. It prepares you to drive positive change, improve organizational effectiveness, and advance healthcare education and workforce development. Graduates are prepared for roles such as Graduate Medical Education Director, Continuing Medical Education Director, Healthcare Policy Analyst, or Director of Workforce Development.

Doctor of Education (EdD) Program

The EdD in Healthcare Leadership is a comprehensive 60-credit asynchronous program designed for professionals who wish to excel in healthcare education, training, and workforce development. With no residency requirement, this program allows students to advance their education while developing advanced competencies in education theory, curriculum design, educational program management, organizational behavior, and professional development in education. Students will gain practical experience through a capstone project or dissertation, allowing them to apply research to solve organization-specific issues by creating products, implementing programs, or developing solutions. Graduates will be equipped to lead and advocate for educational and organizational change within healthcare settings, preparing them for roles such as Teaching at undergraduate and graduate levels, Graduate or Continuing Medical Education Director, Director of Human Resources, Chief Executive Officer, or Chief Medical Officer in academic institutions.

Admissions

The SOGS Admissions Committees have the responsibility to review all applications for admission and full authority to accept or reject any applicant into the programs. The committees are 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, SOGS, (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 into a 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, MHS, MPAS, Med, and EdD Programs of the School of Graduate Studies (SOGS). To be considered for admission as a regular student, an applicant must have submitted a complete application. A complete typically 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 as required by the individual programs;
- 4) an essay/personal statement focused on the applicant's academic strengths and career plans, and
- 5) a research statement describing the applicant's previous research experience (for the PhD program).

Procedures for Admission

The priority deadlines for application to the PhD program is December 15. The deadline for the MPAS program is September 1 of the year prior to anticipated matriculation. There is a \$135 application fee to the MHS Program and specific application fees for the other programs.

Requirements for Admission

PhD Program: To be admitted into 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
- International students must submit TOEFL or Duolingo English Test scores, and equivalency of 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 a personal statement that explains how participating in the PhD program will help the applicant achieve their career goals.
- Submit a research statement that describes the applicant's previous research experience

The admissions committee places great emphasis on recommendations. If an applicant has worked on a research project at an undergraduate school or at a major research center, the applicant should request a recommendation from the research advisor. The admissions committee will intentionally take into consideration, the applicant's essays. If the applicant has some research experience, a description of the specific problem investigated, the methods used to study the problem, the results obtained and the conclusions drawn from these results should be succinctly presented in the research statement.

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, a B average in science courses, as well as a B average in medical school courses
- Submit two letters of recommendation from college instructors in the natural sciences
- Submit a research interest statement
- Participate in a personal interview
- Be evaluated by the PhD Admissions Committee

DDS/PHD Program: To be admitted to the DDS/PhD Program, the applicants must:

- Have an overall B average and a B average in science courses
- Submit two letters of recommendation from college instructors in the natural sciences
- Submit a research interest statement
- Participate in a personal interview
- Be evaluated separately by the PhD and the SOD Admissions Committees

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 DDS, MD, PhD or equivalent professional degree

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

- Have earned a bachelor's degree from an accredited institution
- Submit at least two letters of recommendation from college instructors in the natural sciences
- Submit a statement with healthcare and research related activities

MPAS Program: To be admitted to the MPAS Program, the applicants must:

- Have earned a bachelor's degree from a regionally accredited U.S. college or university, by September 1st of the year prior to matriculation
- Submit a personal statement and complete program specific questions
- Submit three letters of reference from any of the following: supervisor, professor, PA-C, MD/DO, other healthcare professionals, and/or academic advisor.
 - NOTE: Letters must be current and no older than one year at the time of CASPA submission. References from family members are not accepted.

Grades earned in required prerequisite courses of less than C will not be considered. For courses repeated, the higher of the two grades will be used in evaluation of the application.

MEd Program:

To be admitted into the MEd program, applicants must:

- Have earned bachelor's degree from an accredited institution with a minimum GPA: 3.0 (on a 4-point scale).
- Submit official transcripts from all post-secondary institutions attended and sent directly to Meharry Medical College, Office of Admissions & Recruitment electronically via admissions@mmc.edu.
- Submit two letters of recommendation from academic or professional references.
- Submit a statement of Purpose comprising an essay of 300-1500 words detailing academic interests and career goals.
- Standardized Tests such as such as Graduate Record Examination (GRE) and Graduate Management Admissions Test (GMAT) not required.

EdD Program:

To be admitted into the MEd program, applicants must:

- Have earned a bachelor's degree from an accredited institution with a minimum cumulative GPA of 3.0 (on a 4-point scale), or a master's degree from an accredited institution.
- Submit official transcripts from all post-secondary institutions attended and sent directly to Meharry Medical College, Office of Admissions & Recruitment electronically via admissions@mmc.edu.
- Submit three academic or professional letters of recommendation from individuals who are qualified to certify the applicant's abilities and/ or character (i.e. mentor, academic advisor, employment supervisor).
- Submit a 200–300-word personal statement describing principal areas of academic interest, capabilities, experience, and reasons for pursuing the doctorate degree.
- Standardized tests such as Graduate Record Examination (GRE) and Graduate Management Admissions Test (GMAT) are optional.
- Additional Requirements for International Applicants: International Applicants: Must provide degree equivalency verification by International Education Services (IES), World Education Services (WES), Global Credential Evaluators (GCE), or Educational Credential Evaluators (ECE), and English proficiency test scores (TOEFL/IELTS).

The decision of the degree verifying organization and English proficiency test scores must be submitted directly and electronically to Meharry Medical College.

Special Student

A person may be recommended for admission into a program by an SOGS 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 SOGS.

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 SOGS.

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: Transfer credits may be accepted upon approval/recommendation of Department Chairs for doctoral programs. Transfer credits are not accepted for the MHS and PA programs.

Master of Science in Clinical Investigation Program: Trainees enrolled in the MSCI program may receive transfer credit after approval by the Director of the program. Up to eight (8) 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.

Other coursework that is not eligible for transfer toward a graduate degree includes:

- Experiential learning
- Credit by examination
- Advanced placement
- Professional certificates
- Non-credit courses
- Audited courses
- Classes without a qualifying grade

Enrollment Status

A full-time student must generally register for a minimum of nine (9) credit hours during the fall and spring semesters and six (6) credit hours during the summer semester. During the dissertation phase of the PhD and EdD Programs and after being admitted to candidacy, a student may be considered full-time even though he or she has registered for 1 credit hours of dissertation research. For the MHS and MEd programs a full-time student must register for a minimum of nine (9) credit hours during the fall and spring semesters. For the MPAS program, a fulltime student must register for all required semester courses.

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 the Dean's excuses are made in the Office of the Dean of the School of Graduate Studies, and appropriate documentation is required at that time.

Academic Regulations

Requirements for PhD, MSCI, MHS, MPAS, Med and EdD programs

Doctor of Philosophy (PhD) in Biomedical Sciences

To receive the PhD degree in Biomedical Sciences, a student must

- a) complete at least 32 hours of graduate coursework; research courses do not count towards this requirement; not more than 9 credit hours of graduate courses taken at other institutions may be credited toward the 32 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 qualifying or the comprehensive examinations in their emphasis area;
- c) complete a dissertation which meets the approval of the Dissertation Committee and the 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.

Master of Science 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 school Dean.

Master of Health Sciences (MHS)

To receive the MHS, a student must: a) complete 30 hours of the appropriate course work, and b) maintain a minimum GPA of 3.0.

Master of Physician Assistant Sciences (MPAS)

To receive the Master of Science in Physician Assistant Studies degree, a student must complete the entire PA curriculum and fulfill the following requirements: (a) Completion of all MMC PAS courses with a minimum of a letter grade of "C" or above; (b) satisfactory completion of all PAS program courses with a minimum GPA of 3.0; (c) successful completion of all clinical phase courses; (d) successfully pass all summative assessments; (e) compliance with all institutional and program policies and procedures; (f) settlement of all financial obligations to the Institution; and (g) completion of all graduation clearance requirements as instructed by the Registrar.

Master of Education (MEd) in Healthcare Leadership

To receive the MEd. in Healthcare Leadership degree, a student must complete the 30 credit hours curriculum and fulfill the following requirements: (a) Analyze theories and frameworks of adult learning and curriculum design to develop effective educational programs for healthcare professionals. (b) Apply strategic planning and program evaluation methodologies to assess and optimize the impact of healthcare education initiatives. (c) Demonstrate leadership skills to manage educational operations, budgets, and personnel within healthcare organizations. (d) Integrate principles of organizational behavior, communication, and change management to lead impactful educational projects. (e) Conduct applied research to identify and address critical workforce development needs in the healthcare industry.

Doctor of Education (EdD) in Healthcare Leadership

To receive the EdD in Healthcare Leadership degree, a student must complete the 60 credit hours curriculum and fulfill the following requirements: (a) Exhibit Advanced Leadership Skills: Demonstrate leadership in healthcare education and workforce development, effectively managing and guiding educational programs and initiatives. (b) Apply Education Theory and Curriculum Design: Utilize advanced theories of education and principles of curriculum design to develop and enhance healthcare education programs. (c) Manage Educational Programs: Oversee the implementation and evaluation of educational programs, ensuring they meet organizational goals and standards. (d) Analyze Organizational Behavior: Apply concepts of organizational behavior to improve professional development and operational efficiency within educational settings. (e) Conduct and Apply Research: Design and conduct research focused on education leadership development, applying findings to solve real-world organizational issues. (f) Develop and Implement Solutions: Create, implement, and evaluate innovative solutions, programs, or products that address specific challenges in healthcare education. (g) Lead Advocacy Efforts: Advocate for educational and organizational change within the healthcare sector, influencing policy and practice. (h) Communicate Effectively: Demonstrate advanced communication skills necessary for effective leadership, collaboration, and advocacy in healthcare education.

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 experiences are directed towards serving the underserved communities, focused on diseases, health conditions, and other determinants of health that 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 professionalism, excellence, and 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 dissertation committee, 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 student(s) 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 or preceptors.

Career Counseling

The SOGS has an Office for Professional Development, which provides a professional development curriculum to broaden and complement traditional research training in biomedical sciences. The objectives of the office are 1) to facilitate the development of professional skills and responsibilities needed to succeed in biomedical science; 2) to support career planning and 3) to expose students to diverse career options and proficiencies needed for success. The strategy includes a series of workshops and seminars to provide training in both written and oral communication, career identification and planning using an Individual Development Plan (IDP), interviewing skills, CV/resume, and cover letter writing, networking strategies, and delivering powerful oral presentations. In addition, the office provides a career seminar series and invited speakers include successful Meharry alumni, employers from the NIH/FDA, Pharmaceutical/Biotech industry and other researchers/administrators associated with postdoctoral programs around the country. The goal of the seminar series is to expose students to the breadth of careers in the biomedical research workforce as well as provide them with an opportunity for networking with potential employers. Additionally, PhD graduate students attend national meetings where they have the opportunity to meet and network with future postdoctoral employers who visit their presentations and discuss potential postdoctoral opportunities with them. Advanced graduate students may participate in the Meharry-Mount Sinai Summer Scholars program as well. This program is a summer research experience that seeks to complement the training of advanced graduate students to prepare them for the rigors of biomedical research and enhance their competitiveness for future postdoctoral opportunities. Selected Meharry scholars spend the summer working at Mount Sinai side-by-side with some of the world's leading scientists in an environment devoted to clinical, translational, and basic biomedical research. Students also participate in summer internships at NIH and major research institutions where they get advice to assist them with their career decisions.

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 give lectures 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. 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 SOGS per the recommendation of the Student Evaluation and Promotion Committee (SEPC) and approval by the Dean. In addition, if, in the judgment of the SEPC, 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 SOGS. 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 SOGS 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. When a course is repeated, the first grade will remain on the student's transcript and be calculated as part of the student's grade point average. Students are allowed to repeat a course only once. Students who receive a grade of F in any course in the MHS program will not graduate from the MHS and will become ineligible to enter the School of Medicine/Dentistry under this program. After repeating the course when next offered, (next academic year) and upon receiving a grade of B or better and maintaining a 3.0 GPA, the student will be eligible to receive the MHS degree.

Adding or Withdrawing from Course(s)

If a student wishes to add or drop a course(s), he or she can do so via Banner Self-Service during the designated add/drop period noted on the academic calendar. The student is first required to get the approval of their respective division chairperson or program director and/or academic advisee prior to the add/drop period, and following

advisement and approval, will then receive a unique registration pin number to use to add or drop a course(s) via Banner Self-Service. A student may add a course prior to the end of the 3rd week of classes during the Fall and Spring semesters, and prior to the end of the 1st week of classes during the summer semester. 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 semester. 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 SOGS 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 SOGS 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, 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 SOGS Admissions Committee who will then make a recommendation to the Dean.

A student in the PhD 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 PhD 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 SOGS 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 given by these Offices. 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 SOGS 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, June, 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 Program Director informing the Dean that all degree requirements have been completed

- Complete the Graduate Program Self-Assessment Student Questionnaire and return it to the Dean's Office;
- Complete and return to the SOGS the National Research Council Survey of Earned Doctorates (PhD graduates only); and
- Complete all class evaluations, MMC assessments and the Exit Survey

School of Graduate Studies 2026-2027 Academic Calendars



SCHOOL OF GRADUATE STUDIES-PHD

Academic Year 2026-2027	
Monday, June 1, 2026	Summer Session Begins
Friday, June 19, 2026	June 19th Holiday*
Friday, July 3, 2026	4th of July Holiday*
Friday, July 17, 2026	Summer Session Ends
Friday, July 24, 2026	Grades Due in Workday/Registrar's Office (Summer Session)
Thursday, July 30, 2026 - Friday, July 31, 2026	First Year Orientation and Registration
Monday, August 3, 2026	Classes Begin
Friday, August 21, 2026	White Coat Ceremony - 1st Year Ph.D. Students
Monday, September 7, 2026	Labor Day Holiday*
Thursday, September 17, 2026	Constitution Day
Monday, September 21, 2026 to Friday, September 25, 2026	Student Research Week
Wednesday, September 23, 2026	Student Research Day (no classes)
Thursday, October 1, 2026	Last Day to Publicly Defend Dissertation for December Diploma
Monday, October 5, 2026	Convocation
Wednesday, October 7, 2026	Daniel T. Rolfe Scholars Memorial Heritage Lecture
Saturday, October 31, 2026	Last Day to Submit Dissertation for December Diploma



SCHOOL OF GRADUATE STUDIES-PHD

Friday, November 20, 2026	Fall Semester Ends
Thursday, November 26, 2026 & Friday, November 27, 2026	Thanksgiving Holiday*
Friday, November 27, 2026	Grades Due in Workday/Registrar's Office
Friday, December 4, 2026	SEAPC for Continuing Students
Monday, January 4, 2027	Spring Classes Begin
Friday, January 15, 2027	ML King Remembrance Program
Monday, January 18, 2027	ML King Jr. Holiday*
Monday, March 8, 2027 - Friday, March 12, 2027	Spring Break
Thursday, April 1, 2027	Last Day to Publicly Defend Thesis for May Diploma
Wednesday, March 31, 2027	Ralph J. Cizart Heritage Lecture
Friday, March 26, 2027	Good Friday – Meharry Holiday*
Monday, April 5, 2027	Returning Students Summer 2027 Registration
Monday, April 5, 2027	Returning Students Fall 2027 Registration
Friday, April 16, 2027	Classes End for May Graduates



SCHOOL OF GRADUATE STUDIES-PHD

<i>Friday, April 23, 2027</i>	<i>Classes End for Continuing Students/PhD Research Continues</i>
<i>Friday, April 23, 2027</i>	<i>Last Day to Submit Thesis for May Diploma</i>
<i>Friday, April 23, 2027</i>	<i>Grades Due in Workday/Registrar's Office for May Grade</i>
<i>Friday, April 30, 2027</i>	<i>SEAPC for Graduates</i>
<i>Friday, April 30, 2027</i>	<i>Spring Semester Grades Due in Workday/Registrar's Office for Continuing Students</i>
<i>Friday, May 7, 2027</i>	<i>SEAPC for Continuing Students</i>
<i>Saturday, May 15, 2027</i>	<i>Commencement</i>
<i>Monday, May 31, 2027</i>	<i>Memorial Day Holiday*</i>
<i>Monday, May 31, 2027</i>	<i>Summer Session Begins</i>
<i>Friday, July 16, 2027</i>	<i>Summer Session Ends</i>

Master of Health Sciences (MHS)



SCHOOL OF GRADUATE STUDIES- MASTER IN HEALTH SCIENCES

Academic Year 2026-2027	
Friday, June 19, 2026	Juneteenth Holiday*
Friday, July 3, 2026	4th of July Holiday*
Thursday, July 30, 2026 - Friday, July 31, 2026	Fall 2026 Orientation and Registration
Monday, August 3, 2026	Fall Classes Begin
Monday, September 7, 2026	Labor Day Holiday*
Thursday, September 17, 2026	Constitution Day
Monday, September 21, 2026 to Friday, September 25, 2026	Student Research Week
Wednesday, September 23, 2026	Student Research Day (no classes)
Monday, October 5, 2026	Convocation
Friday, November 20, 2026	Fall 2026 Semester Ends
Friday, November 27, 2026	Grades Due in Workday/Registrar's Office
Friday, June 19, 2026	Juneteenth Holiday*
Friday, July 3, 2026	4th of July Holiday*
Thursday, July 30, 2026 - Friday, July 31, 2026	Fall 2026 Orientation and Registration



SCHOOL OF GRADUATE STUDIES- MASTER IN HEALTH SCIENCES

Thursday, November 26, 2026 & Friday, November 27, 2026	Thanksgiving Holiday*
Friday, December 4, 2026	SEAPC (All Programs)
Monday, January 4, 2027	Spring Classes Begin
Friday, January 15, 2027	ML King Remembrance Program
Monday, January 18, 2027	ML King Jr. Holiday*
Friday, January 29, 2027	Spring Census Date
Monday, March 8, 2027 - Friday, March 12, 2027	Spring Break
Friday, March 26, 2027	Good Friday – Meharry Holiday*
Friday, April 16, 2027	Classes End for May Graduates
Friday, April 23, 2027	Grades Due in Workday/Registrar's Office for May Graduates
Friday, April 30, 2027	SEAPC for Graduates
Saturday, May 15, 2027	Commencement
Monday, May 31, 2027	Memorial Day Holiday*

Physician Assistant Sciences (MPAS)



SCHOOL OF GRADUATE STUDIES- PHYSICIAN ASSISTANT

Academic Year 2026-2027	
<i>Monday, May 11, 2026</i>	PAS Summer Term Begins
<i>Monday, May 25, 2026</i>	Memorial Day - No Classes
<i>Friday, July 6, 2026</i>	4th of July - No Classes
<i>Monday, July 20 - Friday, July 24, 2026</i>	Finals Week
<i>Friday, July 24, 2026</i>	PAS Summer Term Ends
<i>Friday, July 31, 2026</i>	Grades Due in Workday
<i>Monday, July 27 - Friday, July 31, 2026</i>	PAS Term Break
<i>Monday, August 3, 2026</i>	PAS Fall Term Begins
<i>Monday, September 7, 2026</i>	Labor Day - No Classes
<i>Thursday, September 17, 2026</i>	Constitution Day
<i>Monday, December 14 - Friday, December 18, 2026</i>	Finals Week
<i>Friday, December 18, 2026</i>	PAS Fall Term Ends
<i>Monday, December 21 - Friday, Friday January 1, 2027</i>	Term Break
<i>Wednesday, November 25, 2026</i>	Grades Due in Workday



SCHOOL OF GRADUATE STUDIES- PHYSICIAN ASSISTANT

<i>Monday, January 4 - Tuesday, January 5, 2027</i>	<i>New Student Orientation</i>
<i>Monday, January 4, 2027</i>	<i>PAS Spring Semester Resumes - Returning Students</i>
<i>Wednesday, January 6, 2027</i>	<i>1st Day of Classes - New Students</i>
<i>Monday, January 18, 2027</i>	<i>MLK Day of Remembrance - No Class</i>
<i>Monday, March 8 - Friday, March 12, 2027</i>	<i>Spring Break - No Classes</i>
<i>Friday, March 26, 2027</i>	<i>Good Friday - No Classes</i>
<i>Friday, April 16, 2027</i>	<i>PAS Spring Term Ends - Graduating Students</i>
<i>Friday, April 23, 2027</i>	<i>Grades Due in Workday - Graduating Students</i>
<i>Friday, April 23, 2027</i>	<i>PAS Spring Term Ends - Returning Students</i>
<i>Wednesday, April 28, 2027</i>	<i>Grades Due in Workday - Returning Students</i>
<i>Friday, April 30, 2027</i>	<i>White Coat Ceremony - Class of 2028</i>
<i>Thursday, May 13, 2027</i>	<i>White Coat Ceremony - Class of 2027</i>
<i>Friday, May 14, 2027</i>	<i>SOGS Hooding Ceremony</i>
<i>Saturday, May 15, 2027</i>	<i>PAS Class of 2027 Graduation</i>

Applied Education in Healthcare Leadership (M.Ed. and Ed.D.) Programs



SCHOOL OF GRADUATE STUDIES- APPLIED EDUCATION PROGRAMS

Academic Year 2026-2027	
Monday, June 1, 2026	Summer Session Begins
Friday, July 17, 2026	Summer Session Ends
Friday, June 19, 2026	Juneteenth Holiday*
Friday, July 3, 2026	4th of July Holiday*
Tuesday, July 14, 2026 to Thursday July 16, 2026	M.Ed. Public Capstone Defense
Friday, July 24, 2026	Grades Due in Workday/Registrar's Office (Summer Session)
Thursday, July 30, 2026 - Friday, July 31, 2026	Fall 2026 Orientation and Registration
Monday, August 3, 2026	Fall 2026 Classes Begin
Friday, August 21, 2026	Pinning Ceremony - 1st Year Students
Monday, September 7, 2026	Labor Day Holiday*
Thursday, September 17, 2026	Constitution Day
Monday, September 21, 2026 to Friday, September 25, 2026	Student Research Week
Wednesday, September 23, 2026	Student Research Day (no classes)
Monday, October 5, 2026	Convocation
Friday, November 20, 2026	Fall Semester Ends



SCHOOL OF GRADUATE STUDIES- APPLIED EDUCATION PROGRAMS

Thursday, November 26, 2026 & Friday, November 27, 2026	Thanksgiving Holiday*
Friday, November 27, 2026	Grades Due in Workday/Registrar's Office
Friday, December 4, 2026	SEAPC for Continuing Students
Monday, January 4, 2027	Spring Classes Begin
Friday, January 13, 2027	ML King Remembrance Program
Monday, January 18, 2027	ML King Jr. Holiday*
Monday, March 8, 2027 - Friday, March 12, 2027	Spring Break
Friday, March 26, 2027	Good Friday – Meharry Holiday*
Friday, April 16, 2027	Classes End for May Graduates
Friday, April 23, 2027	Classes End for Continuing Students/EdD Research Continua
Friday, April 23, 2027	Grades Due in Workday/Registrar's Office for May Grads
Friday, April 30, 2027	SEAPC for Graduates



SCHOOL OF GRADUATE STUDIES- APPLIED EDUCATION PROGRAMS

<i>Friday, April 30, 2027</i>	<i>Spring Semester Grades Due in Workday/Registrar's Office for Continuing Students</i>
<i>Friday, May 7, 2027</i>	<i>SEAPC for Continuing Students</i>
<i>Saturday, May 15, 2027</i>	<i>Commencement</i>
<i>Monday, May 31, 2027</i>	<i>Memorial Day Holiday*</i>
<i>Tuesday, June 1, 2027</i>	<i>Summer Session Begins</i>
<i>Tuesday, July 13, 2027 to Thursday July 15, 2027</i>	<i>M.Ed. Public Capstone Defense</i>
<i>Friday, July 16, 2027</i>	<i>Summer Session Ends</i>

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 Graduate Studies tuition and fees for the 2026-2027 academic year are as indicated below:

Meharry Medical College "Estimated" Budgets for Financial Aid - EdD_Healthcare Leadership_PhD 2026-27 Academic Year

The following budgets embody what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Graduate Studies. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.

COA Components		Monthly	PhD Biomedical Sciences 11 months Yr 1	PhD Biomedical Sciences Yr 2 and Beyond 11 months	PhD Biomedical Sciences Senior Year 9 months	M.Ed Healthcare Leadership 8 months	EdD - Healthcare Leadership 11 months Yr 1	EdD - Healthcare Leadership 11 months Yr 2	EdD - Healthcare Leadership 8 months Yr 3
Direct costs - paid to the College									
Tuition			\$26,668	\$26,668	\$11,082	\$37,500	\$37,500	\$37,500	\$37,500
Fees			\$8,774	\$8,774	\$9,124	\$8,074	\$7,724	\$7,724	\$8,074
Indirect costs - Living expenses									
Books & Supplies			\$1,114	\$1,114	\$912	\$810	\$1,114	\$1,114	\$810
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100		\$23,100	\$23,100	\$18,900	\$16,800	\$23,100	\$23,100	\$16,800
Food (Monthly food allowance)	\$550		\$6,050	\$6,050	\$4,950	\$4,400	\$6,050	\$6,050	\$4,400
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575		\$6,326	\$6,326	\$5,176	\$4,600	\$6,326	\$6,326	\$4,600
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600		\$6,600	\$6,600	\$5,400	\$4,800	\$6,600	\$6,600	\$4,800
Miscellaneous*			\$3,216	\$4,200	\$4,700	\$1,716	\$1,716	\$4,200	\$4,700
2026-27 COA TOTALS	\$3,825		\$81,848	\$82,832	\$60,244	\$78,700	\$90,130	\$92,614	\$81,684
* Includes			\$1,500	Medical and dental incidentals not covered by health insurance					
			\$1,500	Laptop Allowance - 1st years only					
			\$500	Additional costs associated with paper and printing expenses for dissertation					
			\$2,700	Loan fees for year 2 and beyond					
			\$216	Loan fees for year 1					
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.									
Please note that credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.									
Tuition and the health insurance fee will be split evenly between both fall and spring semesters.									
Stipends and tuition assistance are included as a resource in the COA; therefore, limiting the amount of federal aid eligible to borrow.									
First year admits: Programs beginning after July 1, 2026 will no longer be eligible to receive Graduate PLUS loan funding. Must secure private loan.									
			Subject To Change					2026-27 SOGS Budgets	

Meharry Medical College
"Estimated" Financial Aid Budgets - Graduate Studies (MHS)
2026-27 Academic Year

The following budget embodies what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Graduate Studies- MHS Program. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.

COA Components	Monthly	First Year 7 months
Direct costs - paid to the College		
Tuition		\$33,476
Fees		\$9,374
Indirect costs - Living expenses		
Books & Supplies		\$710
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100	\$14,700
Food (Monthly food allowance)	\$550	\$3,850
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$4,026
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$4,200
Miscellaneous*		\$3,216
2026-27 COA TOTALS	\$3,825	\$73,552
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance
	\$1,500	Laptop allowance
	\$216	Loan fees
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.		
PLEASE NOTE: credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.		
Tuition and the health insurance fees will be split evenly between both fall and spring semesters.		
First year admits: Programs beginning after July 1, 2026 will no longer be eligible to receive Graduate PLUS loan funding. Must secure private loan.		
Subject To Change		

2026-27 MHS FA Budgets

Meharry Medical College
"Estimated" Budgets for Financial Aid- Physician Assistant
2026-27 Academic Year

The following budget embodies what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Graduate Studies - Physician Assistant Program. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.

approved before a budget increase.

COA Components	Monthly	First Semester 6 months	First Year 10 months	Second Year 10 months
Direct costs - paid to the College		Year 1	Year 2	Year 3
Tuition		\$22,107	\$44,214	\$40,422
Fees		\$5,814	\$14,726	\$11,380
Indirect costs - Living expenses				
Books & Supplies		\$608	\$1,014	\$1,014
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100	\$12,600	\$21,000	\$21,000
Food (Monthly food allowance)	\$550	\$3,300	\$5,500	\$5,500
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$3,450	\$5,750	\$5,750
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$3,600	\$6,000	\$6,000
Miscellaneous*		\$2,466	\$10,000	\$10,860
2026-27 COA TOTALS	\$3,825	\$53,945	\$108,204	\$101,926
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance		
	\$1,500	Laptop Allowance - 1st year only		
	\$3,500	Loan fees for 10 mo program		
	\$216	Loan fees for 6 mo program		
	\$5,000	Rotation/Clerkship additional costs, included in 2nd and 3rd year		
	\$860	NCCPA Certification, incl 90-day access to Q-Bank - 3rd year		
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent's name, the cost to attend and document must be signed by the child care facility's personnel.				
PLEASE NOTE: credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.				
Tuition and the health insurance fee will be split evenly between both fall and spring semesters.				
First year admits: Programs beginning after July 1, 2026 will no longer be eligible to receive Graduate PLUS loan funding. Must secure private loan.				
		Subject To Change		2026-27 PA FA Budgets

These tables do not include expenses for room and board, books & supplies, transportation, and miscellaneous expenses. For additional information regarding these expenses and an itemized list of fees, please contact the Office of Financial Aid or visit the website: <http://www.mmc.edu/prospectivestudents/tuition-and-fees/index.html>

Payment of Tuition and Fees

Please see information in the section entitled General Financial Information in this Academic Catalog.

Financial Assistance

The SOGS and the divisions of the College offer financial assistance in the form of fellowships for students enrolled in the PhD 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 emphasis area.

PhD 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 MHS, PA, MSCI 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/or Department of Defense.

First-Year Award: This award is presented to a current enrolled second year student in the PA and PhD programs who have attained the highest GPA for the immediately preceding academic year.

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

COURSE DESCRIPTIONS

DOCTORAL PROGRAM:

New Curriculum

The program trains students in organ/pathology-based focus with emphasis on recruiting the best students, and timely graduation of the PhD students. The program is designed to promote early development of critical thinking and writing skills as well as clear milestones including submission of NIH/F31 or similar fellowship applications, to increase the competitiveness of the graduates with peers from other institutions. Students are anticipated to complete their candidacy exam by the end of the second year and to complete their dissertation research by the end of the fourth year. The new curriculum comprises the following new courses:

ASGS 707 - Foundations in Biomedical Research I (Biomed I) - The purpose of the laboratory rotations course is to acquaint first-year graduate students with research in progress in the laboratory of two to three different research faculty. Students are required to participate in three rotations. Two must be in unique labs. If a student wishes, their third rotation can be in a previous lab, but they must petition the PhD Program Director for an exception. The student should be a participant in the research and will be exposed to scientific knowledge and techniques and will participate in a formal reading program designed by the course coordinator and rotation mentor to provide a literature review focused on the research of the lab. The student will select to complete 3 rotations in the laboratories of research faculty and each rotation will be six (6) weeks in duration and all will be completed during the fall semester. The rotations are to be completed before the second semester of the first year resulting in the choice of a dissertation mentor/research advisor and the formulation of a dissertation committee. **6 credit hours, Fall**

ASGS 702 - Foundations in Biomedical Research II (Biomed II) - This course will provide foundational knowledge and develop student critical thinking skills in the context of biomedical research. Basic concepts in physiology, biochemistry, cell signaling, and genetics will be introduced within the framework of cardiovascular disease, cancer, and infectious disease. Primary literature that provides fundamental understanding of the related organ systems will be used as course material. We will cover various aspects of biomedical research, including research design, data analysis, interpretation, and ethical considerations. This course is designed to provide lectures and small group problem-solving sessions to give the student mastery of the organization, composition, and function of the cell from the molecular to whole organ level. **6 credit hours, Fall**

ASGS 754 - Foundations in Biomedical Research III (Biomed III) - This course is a continuation of Biomed II and will further develop student critical thinking skills in the context of biomedical research, focusing on the emphasis area chosen by the student and their research advisor and including scientific communications. We will cover various aspects of biomedical research, including extended data analysis and writing of manuscripts. This course is designed to provide lectures and problem-solving sessions designed to give the student mastery of their research area. Primary literature that provides fundamental understanding of relevant organ systems will be used as course material. **6 credit hours, Spring**

ASGS – 755 - Foundations in Biomedical Research IV - This course will equip PhD in Biomedical Sciences students with the essential skills required for effective scientific communication, with a specific focus on grant writing for securing funding from the National Institutes of Health (NIH) and other relevant sources in biomedical research. Students will learn how to craft compelling grant proposals, enhance their oral scientific communication skills, build professional networks, and effectively disseminate research findings. In addition, this course will provide students with a conceptual understanding of Responsible conduct of Research (RCR), range of skills for professional development in biomedical sciences, including networking, career planning, and navigating the academic landscape. **6 credit hours, Fall & Spring**

The course will follow this concept outline (3 separate courses offered) based on semester and year:

Foundations in Biomedical Research IV A: Summer Year 1

This subpart of the course provides professional development training for the students in the PhD Program, including F31 grant writing boot camp. Students will develop various components of the NIH Ruth L. Kirschstein National Research Service Award (NRSA) F31 fellowship proposal.

- F31 grant writing boot camp- writing specific aims, NIH biosketch, applicant's background and goals for fellowship training, selection of sponsor and institution, inside NIH review perspective
- Exploring availability other grant opportunities- NIH- F99/K00, NSF, American Heart Association, Komen Foundation

Foundations in Biomedical Research IV B: Fall Years 2-4

This subpart of the course will provide student structured time-line and constructive feedback on their F31-grant application in preparation for submission in December deadline to the funding agency NIH. Students will develop various components of the NIH Ruth L. Kirschstein National Research Service Award (NRSA) F31 fellowship proposal.

- General professional development topics
- Year 2 students: Prepare F31 for Dec submission; weekly review of documents with peer team

- Year 3 and 4 students: Peer review year 2 student applications

ASGS 752 - Biomedical 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. **8 credit hours, Fall, Spring & Summer**

ASGS 753 – Dissertation Research - This course is the culmination of the dissertation research experience. In the course, students will assemble, analyze and present (defend) the experimental data from their dissertation research projects. Students are required to register for this course in the semester they plan to defend their dissertation. The course is completed and a grade is reported only after an electronic PDF of the finalized dissertation with all signatures is submitted to the SOGS. **1 credit hour, Fall or Spring**

ASGS 756 – Seminar/Journal Club & Professional Development - This course is designed to enhance critical thinking, scientific communication, and literature evaluation skills among PhD students in Biomedical Sciences. Through seminars and journal club discussion of contemporary topics in biomedical research. **S/U Fall & Spring**

MASTER OF SCIENCE IN CLINICAL INVESTIGATION (MSCI)

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

MPH 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 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 and a Grant Writing Module. 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 takes place in June and is composed of 8 hours of didactic introductions to grant writing, which results in all MSCI participants writing K Awards. Offered in June of each year with meetings of 6 hours each week. **2 credit hours**

MPH 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)
- 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
- 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 OF HEALTH SCIENCES (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 70601 – 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 70701 – 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 70801 – Neuroscience – 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. **4 credit hours, Spring**

GMHS 70901 – Fundamentals of Human 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, Fall**

GMHS 71001 – 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**

GMHS 71101 – Fundamentals of Medical 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. **4 credit hours, Spring**

GMHS 71201 – Fundamentals of Gross 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. **3 credit hours, Spring**

GMHS 71501 – Fundamentals of Pathology – This course provides the students with the general concept of Pathophysiology 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. **3 credit hours, Spring**

MASTER OF PHYSICIAN ASSISTANT SCIENCES (MPAS)

Objective

The Master of Physician Assistant (PA) Sciences Program offered by the School of Graduate Studies is dedicated to increasing the number of students from underrepresented groups in medicine (URiM) into the PA profession. While delivering a curriculum that equips students with the ability to demonstrate cultural humility, provide evidence-based and compassionate care to all patients they encounter, and foster a commitment to community service in underserved populations, through equity, justice and lifelong learning.

The PA Sciences Program, which spans 28-months, will consist of four (4) semesters of didactic training, beginning with basic sciences courses and ending with pre-clinical courses in preparation for the clinical phase of the program. During the clinical phase of the program (three semesters), students will complete seven core rotations, one elective rotation, a summative exam, and a six-week Applied Learning Experience (ALE) course where they will complete their group Capstone Project (manuscript and oral presentation). The program will culminate with a diverse cohort of students from racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.

The goals of the Physician Assistant Sciences program are:

1. To increase the number of students from underrepresented groups in medicine (URiM) into the PA profession.
2. To achieve high graduation rates
3. To maintain a competitive first-time PANCE pass rate.
4. Promote faculty development and demonstrate teaching innovation, scholarship, and service.

COURSE DESCRIPTIONS

GSPA 735-01 - Medical Anatomy and Lab - This course is a foundation course essential to clinical practice of medicine. It will provide a comprehensive survey of the gross anatomy of the human body, while incorporating clinical correlation and allow the students to apply knowledge learned. The survey of the body will include the back, upper and lower extremities, thorax, abdomen, pelvis and perineum and the head and neck. Various structures within these areas, including osteology, soft tissue, muscle, vessels and nerves, will demonstrate common pathologies encountered in medical practice. **5 credit hours, Spring**

GSPA 733-01 - Pathophysiology I - This course is the first of two courses designed to provide a foundation in normal physiology while providing associated pathology. The purpose of this course is to enable first year PA students to

understand mechanisms that allow the body to function at the cellular, tissue, organ system and whole-body levels, with an emphasis on organ system and whole-body levels, and how these mechanisms are affected in pathologic states. **4 credit hours, Spring**

GSPA 752-01 - Physical Examination and Documentation I - Physical Examination and Documentation I is a four-credit hour course designed to provide students with the skills and knowledge needed to elicit a comprehensive history and perform a complete physical examination. Discussions and demonstrations will introduce the appropriate use of diagnostic equipment, interviewing techniques, cultural awareness, patients' rights, and confidentiality. The student will be taught to recognize and differentiate normal from abnormal physical examination findings and to record and orally present their findings in an organized manner. **4 credit hours, Spring**

GSPA 725-01 - Physician Assistant Profession - Physician Assistant Profession offers students the opportunity to understand their professional environment, community resources, legal parameters, and ethical situations they may face. The course also addresses interpersonal dynamics in working with physicians and other healthcare providers. **2 credit hours, Spring**

GSPA 747-01 - Applied Learning Experience I - Applied Learning Experience I is the first in a series of four courses designed to develop student skills related to the integration of patient assessment and clinical medicine concepts from other courses in their curriculum. Student learners will review how to search, interpret, and evaluate the medical literature, then focus on a step-by-step approach to further develop and implement their group Capstone project. Student learners will gain an understanding of the principles of research via, patient-centered problem-based learning activities, critically appraising medical literature, and further developing their group capstone project. **2 credit hours, Spring**

GSPA 739-01 - Medical Research and Information Literacy - This course is designed to help develop critical thinking regarding interpretation of evidence-based practice and medical research literature and its application to patient care to promote evidence-based clinical practice research. Medical knowledge is far from static, and the best clinicians of the coming decades will be those who can most effectively filter and integrate the latest scientific evidence to provide customized, safe, patient-centered care in every clinical encounter. In this course, we will integrate concepts of epidemiology, research study design, and biostatistics and apply them to the interpretation of medical literature, with the ultimate goal of producing clinically relevant answers to patient care-related questions. **2 credit hours, Spring**

GSPA 745-01 - Pathophysiology II (4 credits) - This course is the second of two courses designed to provide a foundation in normal physiology while providing associated pathology. The purpose of this course is to enable first year PA students to understand mechanisms that allow the body to function at the cellular, tissue, organ system and whole-body levels, with an emphasis on organ system and whole-body levels, and how these mechanisms are affected in pathologic states. **4 credit hours, Summer**

GSPA 720-01 - Clinical Laboratory and Medical Imaging - This course will provide the Physician Assistant student with an overview of commonly utilized laboratory tests, and the principles of radiological imaging. The student will learn the appropriate application of these laboratory tests in a clinical setting, and the interpretation of selected clinical laboratory data. The student will also learn the principles of conventional x-ray, computerized tomography, angiography, magnetic resonance imaging, sonography and fluoroscopy as they are applied to the common pathological processes. **3 credit hours, Summer**

GSPA 753-01 - Physical Examination and Documentation II - The second course in the series, Physical Examination and Documentation II is a four-credit hour course designed to develop clinical decision-making while recognizing the medical needs and challenges within the healthcare system for specific patient population. We will utilize problem focused case studies, simulations, small groups, and discussions to apply concepts learned in class. Focus will be on developing a differential diagnosis, collecting, and performing a problem focused history and physical exam and documentation in the medical record utilizing SOAP Notes and the electronic medical record. Emphasis is placed on effective communication skills, social, cultural and behavioral issues affecting health and disease and health literacy. **4 credit hours, Summer**

GSPA 724-01 - Medical Ethics and Legal Medicine - This course introduces PA students to the four areas of medical ethics and provides them with the opportunity to develop skills in identifying, analyzing, and resolving ethical issues in clinical medicine. PA students will participate in research related to medical ethics and learn to apply medical ethics in clinical, research and community environments. **2 credit hours, Summer**

GSPA 734-01 - Pharmacology I - This course is designed to provide a solid foundation in pharmacokinetics, pharmacodynamics, and the physiology associated with drug mechanism of action and interaction. Specific drug classes will be discussed, with attention given to individual drugs, their uses, side effects, similarities, and differences. The relative cost, pharmacokinetics, pharmacodynamics for frequently prescribed agents for treatment of common diseases related to the following organ systems will also be discussed: Cardiovascular System, Gastrointestinal System/Nutrition, EENT, Infectious Diseases, the Dermatologic System, Hematologic System, and the Renal System. **3 credit hours, Fall.**

GSPA 728-01 - Adult Clinical Medicine I - The main emphasis of all Clinical Medicine (CM) courses centers on the principles and provision of primary care medicine in all settings, especially rural and underserved areas. Adult Clinical Medicine I serve as the first course in the Clinical Medicine course series. Adult Clinical Medicine I utilizes an organ system approach to present disease processes in terms of epidemiology, etiology, clinical presentation, physical exam findings, diagnostic studies, differential diagnoses, treatment/ management, patient education and health maintenance. Topics include diseases and conditions pertinent to the Cardiovascular System, Gastrointestinal System/Nutrition, EENT, the Dermatologic System, Hematologic System, and the Renal System. **4 credit hours, Fall**

GSPA 714-01 - Clinical Procedure Skills I (2 credits) - Clinical Procedure Skills I introduces students to essential procedures and skills necessary for practice, such as venipuncture; obtaining blood cultures; arterial blood gases, IV insertion; Injections; Endotracheal intubation; Nasogastric tube placement; and urinary bladder catheterization, and more. **2 credit hours, Fall**

GSPA 754-01 - Public Health (2 credits) - The Public Health course is a 2-credit hour course designed to explore the concepts of public health as they relate to the role of the practicing physician assistant and will examine such concepts as disease prevention, surveillance, reporting and intervention, patient advocacy and maintenance of population health. At the conclusion of this course, the physician assistant student will have an appreciation for the public health system, the health care delivery system, and health policy. **2 credit hours, Fall**

GSPA 755-01 - Reproductive Health - This course offers a systemic study of the epidemiology, presentation, differential diagnosis, and management of OB/GYN and urologic disease processes essential to primary care practice. **3 credit hours, Fall**

GSPA 751-01 - Introduction to Surgery - The course is designed to provide the students with an introduction and an overview to the discipline of surgery. The management of acute surgical problems, critical illness, and elective surgical procedures will be discussed, as well as the pre- and post- operative care of the surgical patient. The course will also introduce knot tying, surgical asepsis, and surgical instrumentation. **2 credit hours, Fall**

GSPA 748-01 - Applied Learning Experience II - Applied Learning Experience II is the second in a series of four courses designed to develop student skills related to integration of patient assessment and clinical medicine concepts from other courses in their curriculum. Student learners will review how to search, interpret, and evaluate the medical literature, then focus on a step-by-step approach to the further develop and implement their group Capstone project. Student learners will gain an understanding of the principles of research via, patient-centered problem-based learning activities, critically appraising medical literature, and further developing their group capstone project. **2 credit hours, Fall**

GSPA 744-01 - Pharmacology II - This course is designed to provide a solid foundation in pharmacokinetics, pharmacodynamics, and the physiology associated with drug mechanism of action and interaction. Specific drug classes will be discussed, with attention given to individual drugs, their uses, side effects, similarities, and differences. The relative cost, pharmacokinetics, pharmacodynamics for frequently prescribed agents for treatment of common diseases

related to the following will be discussed: The Genitourinary and Reproductive System (Male and Female), Pain Management, Neoplasms, the Pulmonary System, the Neurologic System, the Psychiatry/Behavioral Science, and the Endocrine System. Musculoskeletal System, Pulmonary System, Neurologic System, Psychiatry/Behavioral Science, and the Endocrine System. **3 credit hours, Spring**

GSPA 729-01 - Adult Clinical Medicine II - The main emphasis of all Clinical Medicine (CM) courses centers on the principles and provision of primary care medicine in all settings, especially rural and underserved areas. Adult Clinical Medicine II serves as the second course in the Adult Clinical Medicine course series. Adult Clinical Medicine II utilizes an organ system approach to present disease processes in terms of epidemiology, etiology, clinical presentation, physical exam findings, diagnostic studies, differential diagnoses, treatment/ management, patient education and health maintenance. Topics include diseases and conditions pertinent to the Genitourinary System (Male and Female), Reproductive System (Male and Female), Musculoskeletal System, Pulmonary System, Neurologic System, Psychiatry/Behavioral Science, and the Endocrine System. **4 credit hours, Spring**

GSPA 737-01 - Pediatric Clinical Medicine - This course introduces the fundamentals of pediatric medicine, covering the age span from neonate through adolescence. Topics covered include normal growth and development, preventive care and anticipatory guidance, common pediatric illnesses and disorders and their diagnosis and management. Less common, but important disorders that are peculiar to the pediatric population are also included. **3 credit hours, Spring**

GSPA 741-01 - Clinical Procedure Skills II - Clinical Procedure Skills II is the second in a series of two courses used to introduce students to essential procedures and skills necessary for practice, such as casting and splinting, local anesthesia, wound closure, wound closure and dressing techniques and more. The students will have the opportunity to complete ACLS and BLS training. **2 credit hours, Spring**

GSPA 732-01 - Geriatrics - This course is designed to provide students with the principles of geriatric medicine to provide appropriate, evidence-based, compassionate care to older adult patients. The focus of the course will be on the clinical implications of changes associated with the expected physiologic aging process, as well as the common pathologies and treatment within this patient population. **2 credit hours, Spring**

GSPA 726-01 - Behavioral Medicine - The course will present an introduction to the neurobiological, psychobiological, emotional, social, and cultural influences on health and illness in the practice of primary care medicine. Personality, sexual, emotional, and behavioral development across the lifespan including end of life issues will be reviewed. Normative and maladaptive responses to developmental tasks and life stressors in relation to physical and emotional health will be emphasized. Principles of violence, identification and prevention will be examined. Instruction and practice in basic counseling skills for patient health care management and implementation of healthier lifestyle practices will be an important focus throughout the course. **3 credit hours, Spring**

GSPA 749-01 - Applied Learning Experience III - Applied Learning Experience III is the third in a series of four courses designed to develop student learner skills related to integration of patient assessment and clinical medicine concepts from other courses in the MMC PA Program curriculum. Student learners will review how to search, interpret, and evaluate the medical literature, then focus on a step-by-step approach to further develop and implement their group Capstone project. Student learners will gain an understanding of the principles of research via patient-centered problem-based learning activities, critically appraising medical literature, and further developing their group Capstone project. **1 credit hour, Spring**

GSPA 705-01 - Surgery Structured Clinical Practice Experience - This four-week Surgical SCPE provides the physician assistant students the opportunity to participate in the medical decision-making process while developing the appropriate knowledge, skills, and abilities to provide care in the surgical setting. The experiences in this SCPE will include pre-operative, intra-operative (assisting), and post-operative surgical care. The students will perform minimal surgical procedures and become educated in the management and overall care of the surgical patient. **4 credit hours**

GSPA 706-01 - Behavioral Medicine Structured Clinical Practice Experience - This four-week behavioral Medicine clinical rotation is designed to provide the physician assistant student with the opportunity to participate in the medical decision-making process while developing the appropriate knowledge, skills, and abilities to provide care in the behavioral/mental health setting. The student will be exposed to common psychological and substance abuse conditions. The focus will be on recognizing and understanding the development and presentation of these behaviors and how to provide intervention and treatment. **4 credit hours**

GSPA 707-01 - Pediatrics Structured Clinical Practice Experience - This four-week Pediatric clinical rotation is designed to provide the physician assistant student with the opportunity to participate in the medical decision-making process while developing the appropriate knowledge, skills, and abilities to provide care in the ambulatory outpatient pediatric medicine setting. In this rotation, the student will learn the aspects of caring for the pediatric patient from birth through adolescence. The focus will be on recognizing and managing common childhood illnesses, assessment of growth and development, immunizations, nutrition, psycho-social issues, and preventative health care. **4 credit hours**

GSPA 708-01 - Women's Health Structured Clinical Practice Experience - This four-week Women's Health clinical rotation provides the physician assistant student with experience learning and practicing the principles of Women's Health (OB/GYN). The PA student will be provided opportunities to acquire and develop skills to evaluate and appropriately manage women's health patients. **4 credit hours**

GSPA 709-01 - Internal Medicine Structured Clinical Practice Experience - This four-week Internal Medicine clinical rotation is designed to provide the physician assistant student with the opportunity to participate in the medical decision-making process while developing the appropriate knowledge, skills, and abilities to provide acute and chronic medical conditions encountered in the internal medicine setting. This SCPE will provide students with direct experience in the evaluation, treatment, and management of complex cases, which may occur in the inpatient or out-patient setting. **4 credit hours**

GSPA 711-01 - Family Medicine Structured Clinical Practice Experience - This four-week Family Medicine clinical rotation is designed to provide the physician assistant student with the opportunity to participate in the medical decision-making process while developing the appropriate knowledge, skills, and abilities to provide care in the ambulatory outpatient family medicine setting. PA students will be responsible for patients of all ages, from initial visit, through possible hospitalization and follow-up. This SCPE will deliver education on providing comprehensive, evidence-based, gender/age specific individualized care, while addressing acute and chronic diseases, health promotion and disease prevention. **4 credit hours**

GSPA 713-01 - Emergency Medicine Structured Clinical Practice Experience - This four-week Emergency Medicine rotation is designed to provide the physician assistant student with the opportunity to participate in the medical decision-making process while developing the appropriate knowledge, skills, and abilities to provide care in the emergency medicine setting. The student will be able to develop skills in emergency treatment and actions to sustain life and manage a variety of acute, life threatening medical, surgical, and behavioral health clinical problems, specific to the emergency department. **4 credit hours**

GSPA 742-01 - Clinical Elective I - This four-week clinical experiences under the supervision of a physician and/or Physician Assistant designed to acquaint the student with those aspects of the practice of medicine unique to the specific discipline and give the student an opportunity to gain experience in a specific area of interest. Area of interest are chosen from a variety of family medicine, internal medicine specialties, medicine subspecialties or surgical subspecialties. The student will be able to recognize conditions treatable by these specialties, so they can refer patients appropriately and/or work in a supportive role for such specialties. **4 credit hours**

GSPA 750-01 - Applied Learning Experience IV (1 credit) - Applied Learning Experience IV, the final course of the ALE course series, is designed to develop student learner skills related to integrating patient assessment and clinical medicine concepts learned during the didactic and clinical phase of the program. During ALE IV, PA student learner groups will complete their Capstone Project, which includes conducting a literature review and writing a thesis paper under the guidance of a faculty research advisor. The specific skills developed through this process include:

- Critically evaluating relevant medical literature

- Comprehending the research process
- Enhancing the awareness of potential research questions related to clinical practice in underserved areas
- Utilize evidence from clinical and epidemiological research as a basis for clinical decision-making
- Write in a clear, concise, and logical manner

Student learners will meet regularly with their Capstone research advisor to discuss preliminary drafts of their scholarly work and associated assignments. Each research group is required to present their approved Capstone Research Project to a panel that includes at least one of the course directors and one clinical faculty member. **1 credit hour.**

GSPA 780 – Independent Study - This independent study course is designed for Physician Assistant students who require additional support during their clinical year in training due to academic or clinical performance deficiencies. **4 credit hours**

DOCTOR OF EDUCATION (EdD) IN HEALTHCARE LEADERSHIP

Objectives:

The EdD in Healthcare Leadership is a comprehensive 60-credit asynchronous program designed for professionals who wish to excel in healthcare education, training, and workforce development. With no residency requirement, this program allows students to advance their education while developing advanced competencies in education theory, curriculum design, educational program management, organizational behavior, and professional development in education. Students will gain practical experience through a capstone project or dissertation, allowing them to apply research to solve organization-specific issues by creating products, implementing programs, or developing solutions. Graduates will be equipped to lead and advocate for educational and organizational change within healthcare settings, preparing them for roles such as Teaching at undergraduate and graduate levels, Graduate or Continuing Medical Education Director, Director of Human Resources, Chief Executive Officer, or Chief Medical Officer in academic institutions.

Graduates of the EdD in Healthcare Leadership will be able to:

1. Exhibit Advanced Leadership Skills: Demonstrate leadership in healthcare education and workforce development, effectively managing and guiding educational programs and initiatives;
2. Apply Education Theory and Curriculum Design: Utilize advanced theories of education and principles of curriculum design to develop and enhance healthcare education programs;
3. Manage Educational Programs: Oversee the implementation and evaluation of educational programs, ensuring they meet organizational goals and standards;
4. Analyze Organizational Behavior: Apply concepts of organizational behavior to improve professional development and operational efficiency within educational settings;
5. Conduct and Apply Research: Design and conduct research focused on education leadership development, applying findings to solve real-world organizational issues;
6. Develop and Implement Solutions: Create, implement, and evaluate innovative solutions, programs, or products that address specific challenges in healthcare education;
7. Lead Advocacy Efforts: Advocate for educational and organizational change within the healthcare sector, influencing policy and practice; and
8. Communicate Effectively: Demonstrate advanced communication skills necessary for effective leadership, collaboration, and advocacy in healthcare education.

COURSE DESCRIPTIONS

EdD Program Course Descriptions

* GSAE 619 - Foundations of Adult Learning II (3 credits)

This course provides an in-depth examination of adult learning theories and leadership principles tailored to healthcare education and workforce development. Students will critically engage with theoretical frameworks and instructional strategies, exploring how contextual factors shape adult learning in professional healthcare settings. The course covers foundational concepts for effective teaching and learning, analyzes specific learning theories, and investigates the traits and motivations of

adult learners. Additionally, it introduces key leadership theories relevant to healthcare, equipping students with the skills to foster effective learning environments and drive positive change within healthcare organizations. This course serves as the foundational entry point for the Doctor of Healthcare Leadership program.

*** GSAE 601 - Organizational Behavior in Healthcare (3 credits)**

This course explores the intricate relationships between individual psychology, group dynamics, and systemic factors that influence organizational performance in healthcare settings. Students will examine key leadership theories and change management strategies, focusing on how these concepts can be effectively applied to enhance patient outcomes and foster staff engagement. The course will cover understanding organizational dynamics, implementing change management strategies, and

exercising leadership in complex healthcare environments. Through this exploration, students will develop the skills necessary to drive positive change and improve organizational effectiveness in healthcare.

*** GSAE 602 - Leadership Communication and Advocacy (3 credits)**

This course explores advanced strategies in leadership communication and advocacy within healthcare education and workforce development contexts. Students will examine and develop effective approaches for communicating vision, leading change initiatives, and advocating for educational and organizational priorities in complex healthcare environments. Emphasizing the intersection of leadership communication theory and practical application, the course focuses on how healthcare leaders can influence stakeholders, build collaborative relationships, and drive systemic change. Key areas of study include effective communication strategies, interprofessional communication, and strategic communication for educational leadership. Through this comprehensive approach, students will enhance their ability to navigate and lead within the dynamic landscape of healthcare.

*** GSAE 603 - Curriculum Design for Healthcare Professionals (3 credits)**

This course delves into comprehensive strategies for the development, implementation, and evaluation of curricula in healthcare education and professional development settings. Tailored for emerging leaders in healthcare education, the course equips professionals with the skills to design innovative, evidence-based educational programs that effectively address the complex training needs of healthcare practitioners. Key components include the development of educational programs specifically for healthcare professionals, the application of instructional design methodologies, and the alignment of curricula with professional competency standards. Through this exploration, students will gain the expertise necessary to enhance educational outcomes in diverse healthcare environments.

*** GSAE 604 - Applied Research Methods in Healthcare Education (3 credits)**

This course provides healthcare leaders with advanced knowledge and practical skills in applied research methodologies essential for evidence-based decision-making in healthcare education and workforce development. Students will explore both quantitative and qualitative research approaches, emphasizing their application to real-world healthcare challenges. The course will cover evidence-based educational practices and equip students with the skills to conduct and interpret educational research effectively. Through this comprehensive study, participants will enhance their ability to make informed decisions that positively impact healthcare outcomes.

*** GSAE 605 - Educational Program Evaluation and Assessment (3 credits)**

This course offers a comprehensive foundation in educational program evaluation theory and practice specifically within healthcare contexts. Students will explore systematic approaches to assessing the design, implementation, and effectiveness of healthcare education initiatives and workforce development programs. Emphasizing evidence-based evaluation methodologies, the course will cover methods for measuring educational program effectiveness, the development of assessment tools, and the analysis of educational outcomes in healthcare settings. Through practical applications, students will gain the skills necessary to enhance the quality and impact of educational programs in the healthcare field.

GSAE 606 - Communication in Educational Research (3 credits)

Students will develop advanced communication skills necessary for conducting and presenting educational research. This course covers writing research proposals, presenting findings, and effectively communicating research outcomes to diverse audiences.

GSAE 607 - Grant Writing and Fundraising for Educational Programs (3 credits)

This course provides healthcare education professionals with comprehensive skills in developing compelling and competitive

grant proposals. Students will learn the essential techniques of identifying funding opportunities, crafting persuasive narratives, and designing research-driven grant applications specific to healthcare education and workforce development initiatives.

GSAE 615 - Pre-Research 1: Research Proposal Development in Healthcare Leadership (3 credits)

This course guides students through the process of developing a comprehensive research proposal for their dissertation or capstone project. Students will refine their research questions, conduct an extensive literature review, and design a detailed research plan. Emphasis is placed on aligning research objectives with organizational goals and ensuring methodological rigor. By the end of the course, students will have a well-developed research proposal ready for implementation.

GSAE 616 - Pre-Research 2: Advanced Research Design and Implementation (3 credits) Course Description: This advanced course focuses on the practical aspects of designing and implementing research studies in healthcare leadership. Students will learn advanced techniques for data collection, analysis, and interpretation, with a focus on ensuring the validity and reliability of their research. The course also covers project management skills essential for successfully conducting and completing a dissertation or capstone project. By the end of the course, students will be fully prepared to embark on their research projects with confidence.

GSAE 608 - Leading Change in Healthcare Education (4 credits)

This advanced course equips healthcare education professionals with strategic leadership skills to drive meaningful organizational transformation. Students will explore complex change management theories, innovative leadership approaches, and practical strategies for implementing systemic improvements in healthcare educational settings. Through critical analysis of contemporary healthcare challenges, participants will develop the competencies needed to lead cultural shifts, redesign educational programs, and navigate the intricate dynamics of institutional change. The course emphasizes adaptive leadership, emotional intelligence, stakeholder engagement, and evidence-based change management techniques that enable leaders to effectively respond to evolving healthcare education landscapes.

GSAE 609 - Leadership Theory in Action for Healthcare Educators (4 credits)

This dynamic course bridges theoretical leadership frameworks with practical application in healthcare education. Students will critically examine contemporary and classic leadership theories, exploring how these conceptual models translate into effective leadership practices within complex healthcare environments. Through an interactive and reflective approach, participants will develop a sophisticated understanding of leadership principles, examining how different theoretical perspectives inform decision-making, team dynamics, and organizational culture in healthcare education.

GSAE 610 - Leadership Essentials for Healthcare Leaders (4 credits)

This course focuses on essential leadership skills, including decision-making, team dynamics, and conflict resolution. It also covers mentoring techniques to support the development of future healthcare leaders. Placement: This course can be added as a standalone course, building on foundational leadership theories and practices.

GSAE 611 - Instructional Design and Models for Healthcare Education (4 credits)

This course develops comprehensive skills in designing effective instructional materials and programs for healthcare education. It covers instructional theories, design models, and the use of technology in education. Additionally, it incorporates principles and practices tailored to developing instructional strategies for both learners and leaders in healthcare settings. Students will explore how to apply these strategies to enhance learning outcomes and leadership skills among healthcare professionals.

GSAE 612 - Educational Theory, Policy, and Reform (4 credits)

This course explores foundational and contemporary theories of education and examines their application in healthcare settings. Students will analyze various educational practices and their impact on learning outcomes, preparing them to implement effective teaching strategies in healthcare education. Additionally, the course delves into educational policy and reform, exploring how policies are developed, implemented, and reformed to improve educational systems. Students will critically examine the relationship between educational theories and policymaking, and how these elements drive systemic change in healthcare education.

GSAE 613 - Fiscal Management for Educational Growth and Change (4 credits)

Students will explore financial management principles and practices relevant to educational institutions. This course covers budgeting, financial planning, and resource allocation, equipping students with the skills to manage financial aspects of

educational programs and initiatives.

GSAE 614 - Advanced Program Tracking and Evaluation (4 credits)

This course provides an in-depth exploration of advanced strategies for program tracking and evaluation within healthcare education. Students will engage in a deeper dive into longitudinal program assessment, utilizing advanced data analysis techniques to measure the effectiveness of educational interventions. The curriculum emphasizes continuous improvement methodologies, equipping participants with the tools to assess and enhance program outcomes systematically. By focusing on impact measurement, students will learn to evaluate how educational initiatives influence healthcare practices and patient outcomes. Through practical applications and case studies, this course prepares students to implement robust evaluation frameworks that drive meaningful change in healthcare education.

Choose 1:

GSAE 617 - Capstone Project in Healthcare Leadership (2 credits)

This course provides students with the opportunity to apply their knowledge and skills to a real-world project in healthcare leadership. Students will identify a specific issue or challenge within a healthcare organization and develop a comprehensive project to address it. The capstone project involves the creation, implementation, and evaluation of a solution, which could include developing a new program, creating an educational product, or implementing a strategic initiative. Throughout the course, students will work closely with faculty advisors and industry mentors to ensure their projects are practical, impactful, and aligned with organizational goals. The course culminates in a formal presentation and defense of the project, demonstrating the student's ability to lead and innovate in healthcare education.

GSAE 618 - Dissertation in Healthcare Leadership (2 credits)

This course is designed for students to conduct original research that contributes to the field of healthcare leadership and education. Students will identify a research question or problem, conduct a thorough literature review, and design a research study to address the issue. The dissertation process includes data collection, analysis, and interpretation, with a focus on applying research findings to solve organization-specific problems. Students will work under the guidance of a dissertation committee, receiving feedback and support throughout the research process. The course culminates in the writing and defense of a dissertation, demonstrating the student's ability to conduct rigorous research and contribute new knowledge to the field of healthcare leadership.

MASTER OF EDUCATION (M.Ed.) IN HEALTHCARE LEADERSHIP

Objectives:

The M.Ed. in Healthcare Leadership is a 30-credit, asynchronous program designed for emerging leaders in healthcare education and workforce development, with no residency requirement. This program integrates foundational principles of adult learning, curriculum design, and organizational leadership with practical applications in healthcare settings. Through a structured curriculum of core courses, specialized electives, and a capstone project, students develop the skills needed to lead educational initiatives, manage professional development programs, and drive organizational change in healthcare institutions.

Students complete 18 credits of core coursework in adult learning, curriculum design, program evaluation, organizational behavior, leadership communication, and research methods. An additional 6 credits cover professional development and workforce leadership topics. A 6-credit capstone experience, comprising a practicum and final project, provides hands-on opportunities to apply learning to real-world healthcare challenges. The curriculum ensures active engagement with the material and practical skill application.

This program equips you with the knowledge, skills, and practical experience needed to excel in leadership roles within the healthcare sector. It prepares you to drive positive change, improve organizational effectiveness, and advance healthcare education and workforce development. Graduates are prepared for roles such as Graduate Medical Education Director, Continuing Medical Education Director, Healthcare Policy Analyst, or Director of Workforce Development.

Graduates of the EdD in Healthcare Leadership will be able to:

- Analyze theories and frameworks of adult learning and curriculum design to develop effective educational programs for healthcare professionals

- Apply strategic planning and program evaluation methodologies to assess and optimize the impact of healthcare education initiatives
- Demonstrate leadership skills to manage educational operations, budgets, and personnel within healthcare organizations
- Integrate principles of organizational behavior, communication, and change management to lead impactful educational projects
- Conduct applied research to identify and address critical workforce development needs in the healthcare industry

COURSE DESCRIPTIONS

*** GSAE 510 - Foundations of Adult Learning I (3 credits)**

This course provides an in-depth examination of adult learning theories and leadership principles tailored to healthcare education and workforce development. Students will critically engage with theoretical frameworks and instructional strategies, exploring how contextual factors shape adult learning in professional healthcare settings. The course covers foundational concepts for effective teaching and learning, analyzes specific learning theories, and investigates the traits and motivations of adult learners. Additionally, it introduces key leadership theories relevant to healthcare, equipping students with the skills to foster effective learning environments and drive positive change within healthcare organizations. This course serves as the foundational entry point for the Master of Healthcare Leadership program.

***GSAE 501 - Organizational Behavior in Healthcare (3 credits)**

This course explores the intricate relationships between individual psychology, group dynamics, and systemic factors that influence organizational performance in healthcare settings. Students will examine key leadership theories and change management strategies, focusing on how these concepts can be effectively applied to enhance patient outcomes and foster staff engagement. The course will cover understanding organizational dynamics, implementing change management strategies, and exercising leadership in complex healthcare environments. Through this exploration, students will develop the skills necessary to drive positive change and improve organizational effectiveness in healthcare.

***GSAE 502 - Leadership Communication and Advocacy (3 credits)**

This course explores advanced strategies in leadership communication and advocacy within healthcare education and workforce development contexts. Students will examine and develop effective approaches for communicating vision, leading change initiatives, and advocating for educational and organizational priorities in complex healthcare environments. Emphasizing the intersection of leadership communication theory and practical application, the course focuses on how healthcare leaders can influence stakeholders, build collaborative relationships, and drive systemic change. Key areas of study include effective communication strategies, interprofessional communication, and strategic communication for educational leadership. Through this comprehensive approach, students will enhance their ability to navigate and lead within the dynamic landscape of healthcare.

*** GSAE 503 - Curriculum Design for Healthcare Professionals (3 credits)**

This course delves into comprehensive strategies for the development, implementation, and evaluation of curricula in healthcare education and professional development settings. Tailored for emerging leaders in healthcare education, the course equips professionals with the skills to design innovative, evidence-based educational programs that effectively address the complex training needs of healthcare practitioners. Key components include the development of educational programs specifically for healthcare professionals, the application of instructional design methodologies, and the alignment of curricula with professional competency standards. Through this exploration, students will gain the expertise necessary to enhance educational outcomes in diverse healthcare environments.

*** GSAE 504 - Educational Program Evaluation and Assessment (3 credits)**

This course offers a comprehensive foundation in educational program evaluation theory and practice specifically within healthcare contexts. Students will explore systematic approaches to assessing the design, implementation, and effectiveness of healthcare education initiatives and workforce development programs. Emphasizing evidence-based evaluation methodologies, the course will cover methods for measuring educational program effectiveness, the development of assessment tools, and the analysis of educational outcomes in healthcare settings. Through practical applications, students will gain the skills necessary to enhance the quality and impact of educational programs in the healthcare field.

*** GSAE 505 - Applied Research Methods in Healthcare Education (3 credits)**

This course provides healthcare leaders with advanced knowledge and practical skills in applied research methodologies essential for evidence-based decision-making in healthcare education and workforce development. Students will explore both quantitative and qualitative research approaches, emphasizing their application to real-world healthcare challenges. The course will cover evidence-based educational practices and equip students with the skills to conduct and interpret educational research effectively.

Through this comprehensive study, participants will enhance their ability to make informed decisions that positively impact healthcare outcomes.

GSAE 506 - Professional Development in Healthcare Education (3 credits)

This course focuses on strategies for continuous professional learning within the healthcare education landscape. Students will explore the design and implementation of ongoing professional development initiatives that foster competency-based growth models. The curriculum will address key considerations for accreditation and certification, ensuring that programs meet industry standards and effectively enhance the skills of healthcare professionals. Through a blend of theoretical insights and practical applications, participants will learn to create sustainable professional development frameworks that support lifelong learning and adapt to the evolving needs of the healthcare sector. By the end of the course, students will be equipped to lead impactful professional development efforts that contribute to improved healthcare outcomes.

GSAE 507 - Healthcare Workforce Development and Leadership (3 credits)

This course focuses on the application of leadership principles to workforce planning and development within healthcare settings. Students will explore strategies to address healthcare workforce challenges by integrating adult learning theories and organizational behavior concepts. Key topics include effective workforce planning, talent management, and the development of initiatives to enhance staff engagement and retention. Through case studies and practical applications, students will learn to design and implement workforce development programs that align with organizational goals and improve patient care outcomes. This course equips future healthcare leaders with the skills to foster a resilient and adaptable workforce capable of meeting the evolving demands of the healthcare industry.

GSAE 508 - Capstone I: Healthcare Leadership Practicum (3 Credits)

Course Description: This course applies cumulative knowledge in a supervised leadership experience. Students will demonstrate mastery of leadership, educational, and organizational concepts in real-world healthcare settings. The practicum involves working closely with a mentor or supervisor in a healthcare organization to apply theoretical knowledge to practical challenges.

Key Components:

- **Supervised Experience:** Students will engage in a leadership role within a healthcare organization, applying their skills and knowledge.
- **Mentorship:** Regular meetings with a mentor to discuss progress, challenges, and learning experiences.
- **Reflective Practice:** Students will maintain a reflective journal documenting their experiences, insights, and growth.
- **Evaluation:** Performance will be assessed based on predefined criteria, including leadership effectiveness, problem-solving skills, and ability to implement educational strategies.

GSAE 509 - Capstone II: Healthcare Leadership Capstone Project (3 Credits)

Course Description: This culminating experience requires the integration of all program elements. Students will design, implement, and evaluate a significant leadership project addressing a healthcare education challenge. This project should demonstrate the student's ability to apply theoretical knowledge to practical problems and contribute to the improvement of healthcare education.

Key Components:

- **Project Proposal:** Development of a detailed project proposal outlining objectives, methodology, and expected outcomes.
- **Implementation:** Execution of the project in a real-world setting, applying leadership and educational strategies.
- **Evaluation:** Assessment of the project's impact, including data collection and analysis.
- **Final Report and Presentation:** Comprehensive report and presentation of the project, including findings, challenges, and recommendations.

Prerequisites:

- Completion of all coursework.
- Successful completion of the Healthcare Leadership Practicum.

School of Graduate Studies Faculty

Department of Biomedical Sciences

Chair: Pamela Martin, PhD,

Director of Graduate Education and Advancement: Ravirajsinh Jadeja, PhD

PhD Program Director: Pius N. Nde, PhD

MHS Program Director: Tultul Nayyar, PhD, MSCI

Professors: Merry Lindsey, PhD; Pamela Martin, PhD; Josiah Ochieng, PhD; Amos Sakwe PhD, MSCI; Tultul Nayyar, PhD, MSCI;

Associate Professors: Pius N. Nde, PhD; Smita Misra, PhD; Menaka Thounaojam, PhD; Jadeja, Ravirajsinh, PhD; J Shawn Goodwin, PhD

Assistant Professors: Jessica Thomas, PhD; Taneisha Gillyard Cheairs, PhD; Ashley Mutchler, PhD,

Faculty with Adjunct Appointments:

Adjunct Professors: Alissa Weaver, MD, PhD; Frank Douglas, MD, PhD

Adjunct Associate Professors: Rachelle W. Johnson, PhD, Annet Kirabo, PhD

Adjunct Assistant Professors: Antentor Hinton, Jr., PhD, Glenn Simmons, PhD

Department of Physician Assistant Sciences

Chair/Program Director: Michelle Drumgold, M.S.P.H., M.P.A.S., P.A.-C.

Associate Program Director: Kara Caruthers, MSPAS, PA-C;

Medical Director: Eric Jackson, D.O;

Clinical Education Director: Destinee Fowler, MPAS, PA-C;

Admissions Director: Will Wyatt, EdD, MPH, MA;

Associate Professors: Michelle Drumgold, M.S.P.H., M.P.A.S., P.A.-C.; Sheena Brown, PhD, M.S.C.R.; Kara Caruthers, M.S.P.A.S., P.A.-C.; Eric Jackson, D.O.; Wayne Moore, M.D., F.A.C.E.P.; Donna Murray, D.M.Sc., M.S., P.A.-C.

Assistant Professors: Marc Latta, D.H.S.C., P.A.-C.; Will Wyatt, M.A., M.P.H.; Adrienne Hicks, NP-C.; Andria Humphrey-Johnson, MD; Destinee Fowler, PA-C; Rachael Luciano Zahm, MPAS, PA-C;

Department of Integrative Genomics and Epidemiology

Chair: Amadou Gaye, PhD

Professors: Vence L. Bonham Jr., J.D,

Associate Professors: Amadou Gaye, PhD

Assistant Professors: Huishi Toh, PhD; Sarrah Widatalla, PhD.; Antwi-Boasiako Oteng, PhD.

Department of Applied Education

Chair: Michelle Steele, EdD,

Program Director: Allyson Fleming, EdD

Professors: Merry Lindsey, PhD

Associate Professors: Michelle Steele, EdD

Assistant Professors: Allyson Fleming, EdD; Allysceaeioun Britt, PhD, MPH; April Curry, PhD, EdM; David Officer, PhD; Jason Steinas, EdD; Rahwa Mehari, EdD

Adjunct Professors: Frank Douglas, MD, PhD

School of Medicine Administration

Sonja Harris-Haywood, M.D, M.S., M.A. Dean & Interim Designated Institutional Official
Lori Donnell, MBA Sr. Vice President for Clinical Affairs & TBD, Associate Dean for Curriculum and Innovation
TBD, Sr. Associate Dean, Curriculum Evaluation and Effectiveness
Susanne Tropez-Sims, M.D., M.P.H. Associate Dean, Clinical Affiliations
Billy R. Ballard, D.D.S., M.D., Associate Dean, Continuing Medical Education
Roland Jones, D.B.A, M.B.A., M.P.A., Associate Dean, Business and Finance
Theodora Pinnock, M.D, Associate Dean for Student Affairs and Admissions
Eboni Woolcock M.D., MPH, FACOG, Assistant Dean of Student Affairs
Terri Robinson, PhD. MPH, CHES, Assistant Dean of Academic Affairs
Vernita Tucker, M.D., FACOG, Assistant Dean Clinical Curriculum
Sakina E. Eltom, D.V.M., MS, Ph.D., Assistant Dean Pre-Clinical Curriculum

Department Chairpersons

Samuel E. Adunyah, Ph.D., Biochemistry, Cancer Biology, Neuroscience & Pharmacology
Chandranu Dash, Ph.D., Microbiology, Immunology, & Physiology
Sakina E. Eltom, D.V.M., MS, Ph.D., Professional and Medical Education
Peter Millet, Ph.D., Psychiatry and Behavioral Sciences
Sandford Barsky M.D., Pathology, Anatomy and Cell Biology, Interim
Xylina D. Bean, M.D., Pediatrics
Carlton Z. Adams, M.D.; Surgery
Chike Nzeure, M.D., MBA, FASN Internal Medicine

Medical Education at Meharry Medical College

The School of Medicine is the oldest and largest of the four schools at Meharry and admits 115 students per year. The Graduate Medical Education Program has 119 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 receive training from School of Medicine faculty.

The school has 11 departments: Biochemistry, Cancer Biology, and Neuroscience and Pharmacology; Microbiology, Immunology, and Physiology; Professional and Medical Education; Family and Community Medicine; Internal Medicine; Obstetrics and Gynecology; Pathology; Pediatrics; Psychiatry and Behavioral Sciences; Radiology; and Surgery. The school is also 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.

Nashville General Hospital (NGHM) at Meharry Medical College serves as the index hospital for the School of Medicine. There are also affiliations with the Alvin C. York VA Medical Center, HCA Southern Hills, James H. Quillen College of Medicine facilities, Middle Tennessee Mental Health Institute, Matthew Walker Comprehensive Health Center, United Neighborhood Health Centers, Skyline Medical Center, Nashville VA Medical Center*, Vanderbilt University Medical Center* (*via the Meharry Vanderbilt Alliance), and other sites across Tennessee and out of state, such as Detroit Medical Center, University of Alabama, Baton Rouge General, and Methodist Medical Center in Indiana. In addition, there are several community health clinics, and numerous private practice sites in rural and urban underserved areas in the surrounding middle Tennessee area. There are other sites currently under negotiation.

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 school graduates select primary care specialties each year (family medicine, internal medicine, and pediatrics). Meharry continues to be proud of its leadership role in helping to ensure diversity in the nation's health professions workforce, including such specialties as dermatology, neurosurgery, otolaryngology, orthopedics, anesthesiology, emergency medicine, radiology, psychiatry, obstetrics & gynecology, general surgery, pathology, and physical medicine & rehabilitation.

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.

Educational Competencies

The educational competencies of the medical education program leading to the M.D. degree emphasizes medical knowledge, patient care, interpersonal and communication skills, professionalism, systems-based practice, and practice-based learning and improvement. The candidate for the M.D. degree will be required to show competence in each of these areas, as follows:

Medical Knowledge

- Normal biological and physiological processes of cells and tissues
- Nature of various agent/mechanisms that produce changes to normal structure/function of cell
- Mechanism of action of drugs and the metabolic and toxic effects
- Mechanisms of normal growth, development, and aging
- Concepts related to normal behavior and mental illness
- The scientific method and the ability to critically analyze data in the identification of disease/treatment
- Determinants of poor health and the psychosocial, economic, and cultural factors that contribute to the development of common maladies

Patient Care

- To obtain history and perform physical exam
- To order and interpret results of diagnostic tests and evaluative procedures
- To draw conclusions from history/physical exam to identify health problems

- To develop and implement appropriate treatment plans for health problems
- To formulate an appropriate differential diagnosis
- To access and evaluate the correctness of clinical decisions and efficacy of therapeutic interventions
- To adjust/modify treatment plan based on new information
- To perform technical procedures specific to a specialty
- Diagnose and participate in treatment of mental illness
- Apply use of drugs in patient care
- Apply psychosocial principles in delivery of health care
- Apply principles of preventive and health maintenance in the delivery of health care
- Interpret laboratory results in identifying diseases/health problems
- Recognize normal growth and development
- Apply principles of evidence-based medicine and critical data analyses to clinical decision making
- Recognize patients with life-threatening conditions
- Integrate basic sciences knowledge in the clinical assessments/management of patients
- The knowledge, skills, attitudes, and behaviors necessary to perform as generalist clinician

Interpersonal and Communication Skills

- Effective interpersonal communication with patients, family, and members of the healthcare team

Professionalism

- The ability to practice in a manner that reflects an outstanding and acceptance of ethical principles and other recognized standards of professional behavior which guide and characterize the actions of physicians
- Knowledge of ethical principles related to research involving human subjects and the responsibilities of the physician
- The ability to interact respectfully and effectively with patients, peers, and other healthcare workers from diverse cultural and religious backgrounds
- The ability to show compassion and respect for the dignity of patients and confidentiality in the delivery of health care

Systems-based Practice

- Demonstrate the ability to work effectively within the larger context and system of healthcare
- Demonstrate knowledge of the various aspects of health care delivery systems including the social, economic, and political dimensions
- Apply principles of cost containment in the delivery of healthcare
- Work effectively with healthcare teams to enhance patient care and safety

Practice-based Learning and Improvement

- Continuing clinical proficiency and competency in medical practice through the utilization of acquired basic knowledge skills resulting from the process of lifelong learning
- The ability to use information technology to access online information, manage information, and to critically evaluate evidence from the scientific literature in decision making patient care

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 11 departments that administer the instructional, research and clinical activities of the school. The clinical departments include Family and Community Medicine, Internal Medicine, Obstetrics and Gynecology, Pathology, Pediatrics, Psychiatry and Behavioral Sciences, Radiology, and Surgery. The basic science departments include Biochemistry, Cancer Biology, & Neuroscience and Pharmacology; Microbiology, Immunology, & Physiology, Professional and Medical Education.

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 existing curriculum leading to the M.D. degree is a four-year program divided into two phases. Phase I consists of the first 18 months and is referred to as the pre-clerkship phase. Phase II consists of the remainder of the four-year program and is referred to as the clerkship phase.

The curriculum at Meharry Medical College SOM provides an integrated approach for evaluating clinical presentations that includes integrating the foundational medical sciences with clinical diagnostic thinking. This approach provides students the required knowledge, diagnostic and reasoning skills for excellent patient care: communication and history taking, physical exam skills, the ability to critically think through differential diagnosis and high yield diagnostic testing and understanding health systems and the principles of medical ethics. Given the integrative nature of the curriculum, failure of one course impacts the concepts being rendered in others and could result in a repeat of the academic year.

The first portion of the curriculum, referred to as the Pre-clerkship phase, is a clinical presentation-based curriculum,

and it utilizes small group, pedagogical methods, including self-directed learning (SDL), and worked cases. The Foundations of Health, Disease, and Management (FHDM) is the core of the Pre-clerkship curriculum. The other courses, Principals and Practices of Medicine (PPM), Academic Societies Master Colloquium (ASMC), Social Foundation of Medicine (SFM) generally reflect what is being conducted in the FHDM course. During the first semester students are exposed to the rigors of professional school in a supportive but realistic environment, with potential academic challenges, strengths, and weaknesses being identified. Individualized strategies based on student performance on examinations are developed to enhance their success with the aim of maximizing student retention and progression during medical school. The second year starts at the end of May with eight weeks of research and then the start of the extension of the FHDM course along with its companion courses. The last portion of the curriculum (Phase II- clerkship phase) includes assignment to clerkships which utilize a vertical integration of the clinical presentation concepts/schemes learned earlier in the curriculum to further expand knowledge and hands on approach to clinical medicine. The required clerkships are internal medicine, surgery, family medicine, psychiatry, obstetrics & gynecology, and pediatrics. During the fourth year, an ambulatory clerkship is required, as well as clerkships in the following: radiology; either internal medicine inpatient care or critical care unit; and capstone. There is also a one-week Objective Structured Clinical Examination (OSCE) Boot Camp course, which is also a requirement. In addition, the student chooses four units of a minimum of four weeks each, which provide one elective credit each towards graduation.

The White Coat Ceremony

All entering medical students will participate in the White Coat Ceremony, which is an integral part of the curriculum: professionalism. The ceremony serves to ensure that students understand that healthcare is a noble profession that requires not only technical skill, but compassion as well. An oath will be taken during the ceremony by the entering medical students in front of family members, faculty, school leadership, and among peers to acknowledge their main obligation of caring for the patient. This ceremony will be conducted during the Fall Semester and is designed to establish a psychological contract for medical students to stress the importance of caring as a significant aspect of curing. All medical students who are repeating the first year will again participate in the White Coat Ceremony to bond with the new cohort. This policy applies to students re-entering medical school whether they voluntarily withdrew from classes or were required to repeat the academic year.

Mandatory Attendance

One of the behavioral objectives of the institution is to help the students acquire the discipline and motivation necessary to attain their maximum professional development. To facilitate this, students are expected to attend all classes. Punctual attendance is expected. Attendance is mandatory-100% attendance for examinations, clinical exposures, small group sessions, and any other activity deemed mandatory by course/unit directors. If a student is absent from a mandatory activity, the absence must be substantiated with documentation as to the reason for the absenteeism and presented to the Senior Associate Dean of the Office of Student Academic Affairs. Recurrent absenteeism, particularly during examination time, will warrant an evaluative meeting with the Senior Associate Dean for the Office of Student Academic Affairs.

No student is allowed to attend a class for which he/she is not officially registered by the Office of the Registrar unless cleared by the Senior Associate Dean to participate in a class when a passing grade is already earned. Without proper official registration, no retroactive credit will be given.

Year 3: Mandatory attendance is required for ALL clinical and didactic activities. There are no exceptions.

Year 4: Mandatory attendance is required for ALL clinical and didactic activities. For the purpose of interviewing, students are allowed no more than three (3) days per required course.

Admissions

Admissions Requirements and Procedures

The Committee on Admissions is responsible for the acceptance of all students entering the first-year class at Meharry Medical College School of Medicine (MMCSOM). Meharry Medical College School of Medicine encourages applications from and considers all applicants for admission and financial aid without regard to sex, race, handicap, color, creed, sexual orientation, gender identity, or national or ethnic origin. MMCSOM is committed to recruiting, enrolling, and educating substantial numbers of persons from racial minorities, especially African Americans, and those from educationally and socio-economically disadvantaged and underrepresented groups in medicine. The Admissions Committee selects those applicants who are more likely, in its opinion, to become the best students and physicians and fulfill the mission of Meharry Medical College School of Medicine.

Accreditation: The School of Medicine is accredited by the Liaison Committee for Medical Education (LCME).

Selection Factors: The selection of students by the committee is made after careful consideration of many factors. Among them are intelligence, preparedness, motivation, and aptitude. In the evaluation, account is taken of the candidate's scores on the Medical College Admission Test (MCAT), evidence of academic achievement, the extent of academic improvement, balance and depth of academic program, difficulty of courses taken and other indications of maturation of learning ability. The Committee is also interested in the activities of the applicant outside of the classroom including the nature of extracurricular activities, hobbies, the need to work, research projects and experiences, evidence of activities that correlates with the school's mission, and evidence of pursuing interests and aptitudes in depth. Finally, the Committee looks for evidence of personal character and responsibility, compassion, honesty, motivation, altruism, and perseverance which, in the Committee's opinion, indicate that the applicant shows the potential of contributing to the advancement of the art, science, and practice of medicine after obtaining the MD degree. The Committee's consideration of these factors is based on all components of the applicant's file including letters of recommendation, the academic record, the supplemental application, and the interview if the latter is granted. Students who have been dismissed from medical school will not be considered for admission. International applicants must have a permanent resident visa. Canadian applicants are given special consideration.

Entrance Requirements: Completion of the baccalaureate degree is required for admission to the MD program. The education of a physician is life-long. The years of formal schooling are only preparation for the self-education that a physician must continue throughout his/her professional life. Applicants are encouraged to have a broad educational background. No specific major is deemed superior to another.

A major goal of undergraduate college work should be the development of the applicant's intellectual aptitudes and to provide for his/her overall development and maturation. The premedical studies required for admission are set in order to provide the student with a firm foundation in subjects considered essential for the study of medical sciences, to provide the Committee on Admissions a means to evaluate aptitude for negotiating the scientific challenges of the medical education curriculum.

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

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.
Biochemistry****	3 semester hrs.- 5 quarter hrs.

One academic year equals either three quarters, two semesters; or one semester and two quarters.

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 comparative anatomy, quantitative analysis, physical chemistry, psychology, sociology, statistics, and logic. Highly specialized courses that occur in the undergraduate curriculum such as neuroanatomy, histology, human anatomy, bacteriology, immunology, and physiology are very helpful but will not be substituted for courses generally required for entry to medical school.

The Committee on Admissions prefers that the required premedical courses not be taken on a Pass/Fail basis, but that grades be received. The committee recommends that, if two or more introductory courses are offered by the undergraduate departments, the applicant take the more rigorous of the basic science courses.

An accepted student is responsible for completing all prerequisite course work prior to matriculation. It is understood that a student accepted by the school will be denied admission if he/she fails to complete all specifically required courses and to maintain a good record of scholastic performance and conduct during the period following acceptance.

All applicants are required to take the Medical College Admission Test (MCAT). Results of the test must be received before an applicant can be completely evaluated by the Committee on Admissions. Applicants are strongly urged to take the test no later than the Spring of the calendar year preceding the year of entrance into the medical school so that the score can be considered early, and the test can be taken again if improvements in performance are desired. Those who take the test at a later date may find themselves at a disadvantage in that the class may be filled, or largely so, before receipt of test scores. The committee takes into consideration the number of times an applicant takes the MCAT and the improvement in the scores, therefore repeat attempts are discouraged without adequate preparation. Applications and information about the test may be obtained from college advisors or by writing directly to:

Medical College Admission Test
The American College Testing Program P.O. Box 456
Iowa City, Iowa 52243 (319) 337-1357
For information see: www.aamc.org/students/mcat/start.htm

Students accepted for admission must pay tuition and fees in accordance with MMCSOM policy in order to enter. Students may apply for loans, scholarships, and grants in aid in order to meet these financial obligations. The ability to finance a medical education is not a factor in the selection of candidates for admission. However, the final responsibility for payments of fees and tuition and for the provision of living expenses lies with the student. The school may require proof of financial resources before granting matriculation. Only U.S. citizens or international students holding a permanent resident visa are eligible for financial aid.

Application Procedure: Meharry Medical College School of Medicine participates in the American Medical College Application Service (AMCAS) of the Association of American Medical Colleges. AMCAS is a centralized procedure for applying to any participating medical school with only one application and one set of official transcripts of academic work. Formal application for admission to the first-year classes be submitted through AMCAS. The AMCAS application for admission, common to all participating medical schools, is available online only at www.aamc.org. Applicants should

follow the AMCAS menu. For more information, applicants may call: (202) 828-0600 or see: [http:// www.aamc.org/audienceamcas.htm](http://www.aamc.org/audienceamcas.htm).

Regular Admission: Meharry Medical College School of Medicine will accept AMCAS applications to the first year entering class beginning June 1 of the year prior to enrollment. The deadline for having all required credentials into AMCAS is December 1 of the year prior to admission. (This is a receipt date, not a postmark date.) AMCAS applications received after December 1 will not be forwarded to MMCSOM. 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. Applicants are encouraged to submit materials well in advance of the deadline to allow sufficient time for receipt of all materials requested and to resolve any logistical problems that may occur prior to the deadline. Three (3) individual letters of recommendation, preferably from science faculty who have taught you, or a pre-medical committee composite letter of recommendation are required to complete the application. Once all supplementary materials are received and the application is complete, the applicant's admission credentials are reviewed and evaluated. Selected applicants are invited for a personal interview. Following the interview, if granted, final decisions are made by the Committee on Admissions. Decision notifications begin in November and continue until the class is filled.

Early Decision Admission: This is an optional program for the applicant whose first-choice school of medicine is MMCSOM and who desires an admission decision by October 1st. To receive this special consideration, the applicant must:

1. Submit an AMCAS application as an Early Decision applicant to Meharry Medical College School of Medicine (You will be restricted from applying to any other medical schools until MMCSOM reaches a decision) We strongly advise applicants considering applying as an Early Decision applicant to seek advice from the Director of Admissions in advance;
2. Present an academic program of a minimum of 90 semester/135 quarter hours that indicates completion or plans for completion, of all courses required for admission
3. Have a superior academic record and correspondingly strong scores on the MCAT
4. Submit all required credentials to AMCAS by August 1
5. If invited, appear for a personal interview on a mutually convenient date prior to October 1 and,
6. Accept a position in the class, if offered one.

The AMCAS Application for Admission contains complete instructions regarding the Early Decision Program.

Personal Interview: After all application materials have been received, the completed application is screened for possible interview. The Committee on Admissions would like to interview every applicant who passes the initial evaluation screening process, but since this involves thousands of applicants, that is not possible. Only those students who, on the basis of application data, appear to merit serious consideration for admission are selected for interviews. Approximately 6% of all applicants will be invited to MMCSOM for an interview. Invitations for interviews are by email and in writing, and the Admissions Office schedules all appointments. The interview is at the applicant's expense.

Non-Disclosure Policy: Meharry Medical College's policies applying to the disclosure of information on student records are consistent with federal and state regulations. Applicants should be aware that letters and

statements of recommendation or evaluation are prepared, submitted, or retained with a documented understanding of confidentiality and are not subject to inspection by applicants. To ensure that the confidentiality of materials in each applicant's file is protected members of the Admissions and Student Affairs Office staff will not divulge over the telephone, or in writing, information regarding a decision on an applicant. One exception to this rule is that, if written consent is given, the Admissions Office may inform the student's premedical advisor of action taken on the application by the Committee.

Accepted Applicants: Upon notification of an offer of acceptance for admission to MMCSOM, the applicant is allowed three weeks to accept the invitation and to submit a \$100 deposit (certified check or money order only). This deposit is applied to the tuition of the matriculating student. If the student withdraws the application prior to April 30th, the deposit (\$100) is refunded.

New Matriculants: Entering students who withdraw to attend another school will be charged applicable fees and tuition.

Transfer Students: Transfer admissions are rare. However, applications are accepted from students in LCME accredited U.S. and Canadian schools of medicine, who are in good academic standing, have the full approval of the dean of their current school, and have a cogent reason for requesting transfer. Admission is contingent upon space availability therefore academically qualified applicants can still be denied admission due to lack of space.

Former Medical Students: Students are not considered for admission who have previously matriculated in medical school and have been dismissed for academic or disciplinary reasons

BS/MD Program: the 4+4 program

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] program.

The program begins in the summer following the freshmen year at select Historically Black Colleges or Universities [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 ten HBCUs [Alabama A & M, Albany State University, Alcorn University, Fisk University, Grambling State University, Jackson State University, Hampton University, Southern University, Tennessee State University, and Virginia Union University], students who matriculated into these universities majoring in the Biological Sciences or Chemistry and who maintained a 3.25 on a 4.0 scale GPA throughout their first year are invited to participate in the Summer Enrichment Program at Meharry Medical College. These students are recommended 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. The final selection to be enrolled in the enrichment program is made by the Meharry Medical College BS-MD Program Director and Staff.

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, English, Oral Communication, Written Communication, and applicable MCAT prep depending on level of education. Rising fourth year students participate in the full MCAT Preparation Course.

Technical Standards for Admission, Retention, and Graduation

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, retention, 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 at Meharry Medical College School of Medicine is considered without regard to disability, but with the expectation that they can complete satisfactorily all parts of the curriculum within the prescribed four-year period. The school does not offer a decelerated curriculum.

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 an 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. The School of Medicine provides reasonable accommodation in its academic programs to qualified individuals with disabilities. A reasonable accommodation is one that does not require substantial program modifications or lower academic standards.

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.

Observation: The candidate must be able to observe demonstrations and participate in experiments in the basic sciences including, but not limited to anatomic, physiologic, and pharmacologic demonstrations in cadavers, 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, hear and observe patients 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 and other students. Communication includes speech, reading and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the healthcare team.

Motor Coordination or 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 (proctoscopy, paracentesis, etc.) and read EKGs and X-rays. A candidate should be able to execute motor movements 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 solving, reasoning, analysis and synthesis. Problem solving and the critical thinking skills demanded of physicians require 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 school's curriculum's full requirements to graduate as skilled and effective practitioners of medicine. The following technical requirements apply:

1. The candidate can observe demonstrations and participate in experiments in the basic sciences.
2. The candidate can 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.
1. The candidate can perform precise, quick and appropriate actions in emergency situations.
2. 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 can accept criticism and respond with the appropriate modification of behavior.
11. Able to tolerate physically taxing workloads and have the ability to display flexibility and function effectively when stressed, and function well in the face of uncertainties and in changing environments.

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 and Step 2 Clinical Knowledge in a timely manner.

An affirmative vote of the Student Evaluation and Promotion Committee 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 the Curriculum Committee and coordinated centrally by the Department of Professional and Medical Education for the pre-clinical years, and departmental during the clerkship years.

The definitive evaluation of the student's work is expressed by A, B+, B, C+, C, F, S, U, W/A or W/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 departments must provide a departmental narrative evaluation and a letter grade for all students. All grades are to be submitted in Banner within four weeks 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 Form** must be submitted with the explanation to the Senior Associate Dean of the Office of Student Academic Affairs for approval after the student successfully or unsuccessfully completes or remediates the course when there is an "I" grade or in general when a previously submitted final grade was in error. A recommendation for change of grade must include appropriate reasons for the change requested. The form must be approved and signed by the departmental chairperson and approved by the Associate Dean or Senior Associate Dean of Student Academic Affairs.

Grades for Off Campus Courses

Students taking selective/electives will be governed by the grading system (scale) of our institution or course. The grade will be accepted as submitted by the away institution and transposed to Meharry's evaluation system.

Leave of Absence

A leave of absence is an interruption of the normal course of study requested by a student in good academic standing, requiring prior written approval by the Dean or his/her designee, Senior Associate Dean or Associate Dean for Student Academic Affairs. 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. By College policy, students are not allowed to sit for board exams while on leave of absence unless the leave is to enhance their medical education or professional development, by participating in yearlong research or an additional graduate degree at another institution. An official leave of absence form must be processed and can be obtained from the Office of Student Academic Affairs. If the situation is appropriate, the Senior Associate Dean of Student Academic Affairs may place a student on an Involuntary Leave of Absence and the form will be processed.

A leave of absence may be granted upon receipt of a written request for reasons of medical leave, personal and/or family exigencies, financial straits requiring full-time employment, and other such extenuating situations. A Leave of Absence solely due to academic difficulty, i.e., failing courses, exams, and practice tests, will not be granted. Medical Leave requests must include a written statement from a physician that such a leave is indicated in the best interests of the student. The written request and physician statement (if requesting medical leave) will be considered by the Senior Associate Dean of Student Academic Affairs and may require additional documentation to accompany a request. One month prior to an anticipated return, the student must request in writing, termination of Leave of Absence for reinstatement to active status. The student may be required to provide official documentation to return, including professional documentation of meeting Technical Standards for Admission, Retention, and Graduation, an up to date background check and urine drug screen, and stipulations to abide during matriculation. Extensions of the Leave of Absence may be requested, but not necessarily granted. If granted, the extension will not exceed one additional year. Failure of such requests will result in automatic dismissal.

Leave of Absence: Yearlong Research or Professional Development

LEAVE OF ABSENCE FOR ENHANCEMENT OF MEDICAL EDUCATION

The College may allow eligible students, who are in good standing, to go on a Leave of Absence to enhance their medical education by participating in yearlong research or an additional graduate degree at another institution. Students who enroll in yearlong research might be eligible to receive Meharry Medical College School of Medicine elective course credit, rather than take a Leave of Absence, if the research opportunity meets the standards required as outlined by the Course Director of the course, Medical Scholar Research Experience (ASMD 903 and ASMD 904, 9 credit hours each). Students whose research does not qualify for elective credit and enrolled as full-time students at other institutions for an additional graduate degree must take a Leave of Absence.

All students must meet with the Senior Associate Dean for approval. For the purpose of sitting for the USMLE Step examination, students in this category will be considered enrolled at Meharry Medical College. Meharry Medical College tuition will not be assessed, but modified fees may apply. Students are not eligible for federal financial aid when tuition is waived. Students should always contact the Director of Financial Aid to ensure a clear understanding of the impact of not being eligible for financial aid and financial obligations.

Academic Standards and Policies

All students must meet the academic standards found in the Student Academic Policies and Procedures Manual, School of Medicine. The policies are reviewed with all matriculating students. A copy of the manual or other policies can be retrieved from the School of Medicine website 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. However, if the failed course is Foundations of Health, Disease, and Management, the student will either be required to repeat the year, if eligible; or otherwise, be dismissed due to poor academic performance. Any student receiving a grade of F in courses totaling greater than or equal to 22 credit hours in a single academic year will be recommended for dismissal from the School of Medicine due to poor academic performance or progress.

Any student receiving a grade of F in a course taken a second time and any student repeating a year due to dropped or failed courses, who subsequently earns an F in any of those courses will be referred for dismissal due to poor academic

performance or progress. *(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 the Registrar 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

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) and has passed the licensure exams (as applicable). The following will be placed on automatic **academic probation** in the School of Medicine: 1) failure to maintain a cumulative grade point average of a minimum of 2.0, 2) any student who received a grade of **F** in courses totaling 11 credit hours, but less than 22 credit hours in an academic year, 3) any student in Phase I who is repeating the year, and subsequently fail any of their remaining courses in Phase I of the curriculum. In addition, when a student is eligible to take USMLE Step 1 or Step 2 during each semester and fails to do so at least once, the student is considered as failure to academically progress.

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 Senior Associate Dean of 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 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 an 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. Decelerated students are not eligible for the Dean's List until they have completed the first-year courses.

Honors

A committee led by the Associate Dean or Senior Associate Dean for Student Academic Affairs will review student academic progress and receive nominations in review of 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 benefactor.

A minimum cumulative GPA of 3.445 is required for consideration for graduation with honors. An honor is designated by the Office of Admissions and Records and is only for graduation stratification.

Students may designate grades receiving “A” on Curriculum Vitae to denote they have excelled in a course.

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 Director 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 Senior Associate Dean for Student Academic Affairs may require documentation to accompany a request for withdrawal. **Poor academic performance alone does not constitute a sufficient basis for withdrawing from a course.** Students permitted to withdraw from a course for medical reasons or other extenuating circumstances before more than half of the course is complete will have a **“WA” (Withdrawal Administrative)** entered on their transcript. The student must obtain the approval of the appropriate department head, the Senior Associate Dean or Associate Dean for Student Academic Affairs and file the approved form in the Office of Admissions and Records. Students who are failing and withdraw from a course when more than half of the course has been completed will receive a grade of “F”.

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 the Registrar. 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 Admissions and Recruitment 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 Actions 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.

Request for Transfer to the School of Medicine

The following policies apply to medical students seeking to transfer into the Meharry School of Medicine:

- The applicant must be enrolled and in good standing at an LCME-accredited medical school. LCME accreditation assures the institution meets the same expectations for student learning outcomes and training experiences.
- To verify the applicant is in good academic standing and eligible to continue training at their present institution, the applicant must submit (1) a dean's letter of evaluation and (2) a letter of reference from another administrator.
- The applicant must be a U.S. citizen, permanent resident (copy of green card required), or U.S. National (supporting documentation required).
- The applicant must be eligible to receive federal financial aid, if needed.
- Due to the horizontal/vertical integrated curriculum, a candidate cannot transfer into any year other than entry into the first year of medical school. Upon the advent of the new integrated curriculum in 2018, it was decided by the Dean of School of Medicine and the SOM Curriculum Committee that transfer students would not be accepted after the 2019-20 school year unless the applicant agrees to start over and undergo the integrative curriculum. With the integrated system, transfer students would otherwise not have experienced the new curriculum and potentially would not be on equal footing as their peers. The applicant for transfer must have met the same admission requirements and academic standards as other applicants being considered for acceptance for the first-year class. Transfer students can be considered for acceptance if they agree to start over at Meharry with the first year; therefore, advanced standing is not utilized for determination for year of placement.
- Applicants must be reviewed and accepted by the Admissions Committee. There must be space available in the entering class. The Senior Associate Dean for Student Academic Affairs will be notified and the recommendation for transfer must ultimately be approved by the Dean of the School of Medicine.
- Prior to matriculation, the applicant must submit copies of all official undergraduate, graduate, and professional school transcripts to Meharry's Office of Admissions & Recruitment.
- Once a student matriculates at Meharry, the Meharry transcript does not record any prior credit hours for the transfer student. However, the transfer student's transcript for the years at another institution is kept in the student's official file in the Office of the Registrar.

Credit for coursework that is not eligible for transfer toward a medical degree includes:

- Experiential learning
- Credit by examination
- Advanced placement
- Professional certificates
- Non-credit courses
- Audited courses
- Correspondence or extension courses



SCHOOL OF MEDICINE

Class of 2027 Academic Year 2026-2027	
Monday, June 8, 2026	Class of 2027 Fall Semester begins
Saturday, July 4, 2026	* Independence Day Holiday
Monday, September 7, 2026	* Labor Day Holiday
Thursday, September 17, 2026	Constitution Day
Wednesday, September 30, 2026	* Student Research Day (No Class)
Monday, October 5, 2026	Convocation
Thursday, November 26, 2026 - Friday, November 27, 2026	* Thanksgiving Holiday
Friday, December 18, 2026	Fall Semester Ends
Monday, January 4, 2027	Spring classes begin
Monday, January 18, 2027	* Rev. Dr. Martin Luther King, Jr. Holiday
Friday, March 19, 2027	Match Day- <i>tentative</i>
Friday, March 26, 2027	* Good Friday - Meharry Holiday
Saturday, May 15, 2027	Commencement
Friday, May 21, 2027	Class of 2027 Spring Semester ends
Saturday, June 19, 2027	* Juneteenth Holiday



SCHOOL OF MEDICINE

Class of 2028 Academic Calendar 2026-2027	
Monday, June 1, 2026	Class of 2028 Fall Semester begins
Friday, June 19, 2026	Juneteenth Holiday
Saturday, July 4, 2026	* Independence Day Holiday
Monday, September 7, 2026	* Labor Day Holiday
Thursday, September 17, 2026	Constitution Day
Wednesday, September 30, 2026	* Student Research Day (No Class)
Monday, October 5, 2026	Convocation
November 26 - November 27, 2026	* Thanksgiving Holiday
Wednesday, December 23, 2026	Fall Semester Ends
Monday, January 4, 2027	Spring classes begins
Monday, January 18, 2027	* Rev. Dr. Martin Luther King, Jr. Holiday
Friday, March 26, 2027	* Good Friday - Meharry Holiday
Monday, May 31, 2027	* Memorial Day Holiday
Saturday, Jun 19, 2027	* Juneteenth Holiday
Friday, June 4, 2027	Class of 2028 Spring Semester ends



SCHOOL OF MEDICINE

Class of 2030 Academic Year 2026-2027

Saturday, June 19, 2027	Juneteenth Holiday
Tuesday, June 22, 2026 - Wednesday, June 23, 2026	Class of 2030 MMC orientation
Friday, June 25, 2026 - Saturday, June 26, 2026	Class of 2030 SOM orientation begins
Monday, June 29, 2026	Class of 2030 classes begin
Saturday, July 4, 2026	* Independence Day Holiday
Friday, August 14, 2026	White Coat Ceremony (1st Year Students Only)
Monday, September 7, 2026	* Labor Day Holiday
Wednesday, September 30, 2026	* Student Research Day (No Class)
Monday, October 5, 2026	Convocation
Monday, October 19, 2026 - Wednesday, October 21, 2026	* Class of 2030 Fall break
Thursday, November 26, 2026 - Friday, November 27, 2026	* Thanksgiving Holiday
Friday December 18, 2026	Fall Semester Ends
Monday, January 4, 2027	Spring classes begins
Monday, January 18, 2027	* Rev. Dr. Martin Luther King, Jr. Holiday
Monday, March 8, 2027 - Friday, March 12, 2027	* Class of 2030 Spring Break
Friday, March 26, 2027	* Good Friday - MeHarry Holiday
Friday, May 14, 2027	Class of 2030 Spring Semester ends

Financial Information

Tuition and Fees

Tuition and fees are set annually by the Board of Trustees and are subject to review and change without notice. The tentative tuition and fees for the 2026-2027 academic year are listed below.

Meharry Medical College "Estimated" Budgets for Financial Aid - Medicine 2026-27 Academic Year

The following budgets embody what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Medicine. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.								
COA Components	Monthly	First Year 11 months	Second Year 10 months	Third Year 12 months	Fourth Year 11 months	Post Senior 6 months (ASMD620)	Board Review M3 6 months (ASMD420)	Board Review M2 5 months (ASMD420/505)
Direct costs - paid to the College								
Tuition		\$59,170	\$59,170	\$59,170	\$59,170	\$7,396	\$29,585	\$29,585
Fees		\$9,862	\$9,286	\$9,836	\$8,890	\$5,820	\$6,764	\$6,216
Indirect costs- Living expenses								
Books & Supplies		\$1,114	\$1,014	\$1,216	\$1,114	\$0	\$0	\$0
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100	\$23,100	\$21,000	\$25,200	\$23,100	\$12,600	\$12,600	\$10,500
Food (Monthly food allowance)	\$550	\$6,050	\$5,500	\$6,600	\$6,050	\$3,300	\$3,300	\$2,750
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$6,326	\$5,750	\$6,900	\$11,326	\$3,450	\$3,450	\$2,875
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$6,600	\$6,000	\$7,200	\$6,600	\$3,600	\$3,600	\$3,000
Miscellaneous*		\$6,500	\$5,696	\$6,000	\$6,704	\$1,100	\$1,804	\$1,804
2026-27 COA TOTALS	\$3,825	\$118,722	\$113,416	\$122,122	\$122,954	\$37,266	\$61,103	\$56,730
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance				Tuition is assessed at 25% health insurance in 1/2		
	\$1,500	Laptop Allowance (1st years ONLY)						
	\$696	USMLE Step I registration fees (2nd year ONLY)						
	\$1,000	Additional travel expense for 3rd year						
	\$1,204	USMLE CK - Step II registration fees, incl 90-day access to U-World QBank (4th year ONLY)						
	\$170	VSAS application service (4th year ONLY)						
	\$330	ERAS applications (4th year ONLY)						
	\$5,000	4th year residency interview travel costs, includes travel for USMLE CK Step II						
	\$3,500	Loan fees: MD1 - MD4				if delayed M2 comp fee will be \$1,362 if delayed M3 comp fee will be \$1,919		
	\$350	Loan fees for MSS						
	\$1,054	Loan fees for Special Status/Board Review						
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.								
PLEASE NOTE: credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.								
Tuition and the health insurance fee will be split evenly between both fall and spring semesters.								
Due to OB3 changes, Class of 2030 admits will be eligible for three years of Grad PLUS borrowing. Year four must be funded through Federal Unsubsidized and/or private loans, if needed.								
Subject To Change								
2026-27 SOM FA Budgets								

Basic Sciences Course Descriptions

DEPARTMENT OF PROFESSIONAL AND MEDICAL EDUCATION

Division of Clinical Skills and Competency

COURSE DESCRIPTIONS

ASMD 336 –Principles & Practice of Medicine I (PPM I) - This course, offered in the fall of the first year, concentrates on the patient-physician encounter; communication skills, history taking and physical examination skills. PPM I focus on the development of critical thinking skills and clinical reasoning skills. These skills are developed through medical simulation (task trainers, standardized patients and medical simulators). A focus is also placed on patient confidentiality and the development of cultural competency skills and health literacy (styles of communication, cultural competency, and patient confidentiality). Students will utilize the Pamela C. Williams Center for Simulation and Clinical Skills for an introduction to clinical ethics and end-of-life issues. Scheduled sessions will utilize a small group format. Assessment of the students will be performed using a skills assessment checklist and Objective Skill Clinical Examination (OSCE). Additional interactive sessions address medicine and societal issues relating to basic science coursework occurring parallel to the PPM course. **(2.0 credit hours)**

ASMD 337- Principles & Practices of Medicine II (PPM II) -- This course is offered during the Spring semester of the first year and builds on the simulated clinical observations made by the students during their time in the Pamela C. Williams Center for Simulation and Clinical Skills. Having participated in simulated clinical interactions with standardized patients mastering clinical skills and techniques as well as taking histories and performing physical examinations, the students continue to develop their own skills in these two key areas. Peer partners, standardized patients, medical simulation and videotaping sessions with feedback are used to help the students perfect their interviewing and examination skills. The physical examination skills learned during this semester facilitate their transition to PPM III and PPM IV courses... **(2.0 credit hours) Prerequisites: Principles & Practice of Medicine I (PPM I)**

ASMD 496 and ASMD 497 Principles & Practice of Medicine III & IV (PPM III and PPM IV) – This course provides a bridge for the longitudinal incorporation of the basic sciences and clinical medicine as well as the tools and the experiences necessary to develop competent, compassionate physicians. These two courses build the foundational skills needed for effective patient communication and physical examination techniques. There is an emphasis on professionalism, health literacy, cultural competence, and communication of medical information through written and oral presentations. This course will utilize small group activities, simulation activities, skills sessions, standardized patient encounters, practical exposure to physical examination skills and faculty/peer feedback. This course provides regular feedback by faculty and peers. **ASMD 496 – 2 credit hours and ASMD 497- 2 credit hours) Prerequisites: ASMD 336 and ASMD 337- Principles & Practice of Medicine – I and II**

Division of Integrated Didactics

COURSE DESCRIPTIONS

MSRE I 903– Medical Student Research Experience 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. To successfully complete this course, students must complete or update the CITI online training. **(1 credit hour)**

ASMD-309-01 Introduction to Medicine This course is offered to the entering first year students in the summer preceding their first fall semester. The course is designed to introduce students to the molecular and cellular mechanisms underlying homeostasis, cell growth and division, quiescence, senescence, and apoptosis, in order to provide them with a foundation for understanding the processes of health and disease. Biochemistry, cell biology, genetics, immunology, microbiology, and pathology are featured prominently in this unit. Highlights include the student's first hands-on experiences in the anatomy, molecular biology and microbiology laboratories. **(3 Credit hours)**.

ASMD 370 – Academic Societies Masters' Colloquium I (ASMC I) This course is designed to develop students' knowledge, attitudes, and skills related to principles of professionalism, ethics, and caring, as students embark on their roles as future physicians. Specific topics include the culture of medicine, physician-patient communication, empathy, humanism, and various controversies in medicine. This course occurs in weekly two-hour sessions, applying active learning methods that focus on facilitated discussions. Sessions may also incorporate video, art, music, poetry, and role-play. Colloquium sessions are deliberately positioned at the end of each instructional week to facilitate reflection on the clinical presentation-based themes of the week and the issues they raise related to the general subjects of the colloquium. Students will learn, teach, and lead in groups called Academic Societies, each guided by a designated clinical and non-clinical scientist faculty member. These faculty members will partner with each Academic Society to facilitate the professional development of students and provide regular feedback to each student in individual meetings. Students will also develop skills of self-evaluation and peer-evaluation in this course, as they practice ownership of their lifelong professional development. **(2 credit hours)**

ASMD 371 – Academic Societies Masters' Colloquium II (ASMC II) This is the second semester of a four-semester sequence. Academic Societies Masters' Colloquium II is designed to develop students' knowledge, attitudes, and skills related to principles of professionalism, ethics, and caring, as students expand their identities as future physicians. Specific topics include telemedicine, research ethics, medical jurisprudence, gender issues, life balance, healthcare economics, end of life care, integrative medicine, and various controversies in medicine. This course occurs in weekly two-hour sessions, applying active learning methods that focus on facilitated discussions. Sessions may also incorporate video, art, music, poetry, and role-play. Colloquium sessions are deliberately positioned at the end of each instructional week to facilitate reflection on the clinical presentation-based themes of the week and the issues they raise related to the general subjects of the colloquium. Students will learn, teach, and lead in groups called Academic Societies, each guided by a designated clinical and non-clinical scientist faculty member. These faculty members will partner with each Academic Society to facilitate the professional development of students and provide regular feedback to each student in individual meetings. Students will also develop skills of self-evaluation and peer-evaluation in this course, as they practice ownership of their lifelong professional development.
(2 credit hours) Prerequisites: ASMC I

ASMD 490 and ASMD 491– Academic Societies Masters' Colloquium III and IV (ASMC III and ASMC IV) These are the third and fourth semesters of a four-semester sequence. Academic Societies Masters' Colloquium is a series of weekly 2-hour sessions that occur on Friday mornings for medical students in Year 2. Sessions address issues related to ethics, controversies in medicine, evidence-based medicine, critical thinking, safety and quality improvement, communication, humanism, empathy, wellness, life-long learning, bias, leadership, and professionalism. Four courses (Academic Societies Masters' Colloquium I - IV) span the pre-clerkship years. They employ a variety of learning modalities including ethical analysis and reflection essays, and various types of discussion-based formats (e.g., student led and small group discussions). Every effort is made to arrange session topics to align temporally with the clinical presentations covered in the Foundations of Health Disease and Management Course and/or the students' sessions and experiences in the Social Foundations of Medicine Course. **(ASMD 490- 2 credit hours; ASMD 491- 2 credit hours)**
Prerequisites: ASMC I and ASMC II

ASMD 375 Foundations of Health, Disease, and Management I (FHDM I).

This course is offered to first year medical students during the Fall semester and is designed to foster the rapid acquisition, integration, and application of scientific knowledge fundamental to the practice of medicine. Students will explore human health and disease within individual organ-system based units (e.g. Musculoskeletal, Cardiovascular, Respiratory and Renal units). By learning the basic and clinical sciences synchronously, a high level of horizontal and vertical integration and clinical relevance is achieved. The integrated curriculum aims to equip students with the skills to make highly effective evidence-based diagnoses. Additionally, the student-centered curriculum allows students to actively engage in the learning process. In activities such as the Worked Cases sessions, students will learn to communicate effectively and function effectively in teams while solving clinical cases. In addition, the FHDM I course incorporates experiences and activities, such as the Student Directed Learning (SDL) component, that give students opportunities to assess their knowledge and identify their own strengths and deficiencies and then engage in self-directed learning to address gaps knowledge. FHDM I course consists of two integrated units: Unit 1- 'Musculoskeletal' (MSK), and Unit 2- 'Cardiovascular, Respiratory and Renal' (CRP). The sequence of basic science and clinical presentation within each unit has been structured and organized so that knowledge builds on itself (the concepts developed during the study of one topic provide the foundation for subsequent topics). MSK, a 6-week unit is an integrated presentation of the major basic science concepts related to the musculoskeletal and integumentary (skin, hair & nails), systems. The course content is organized and explored in the context provided by a sequence of common and broadly applicable basic science and clinical lectures that include orthopedic, rheumatologic, neurologic and dermatologic issues. Physiology, Anatomy, Immunology, Microbiology and Pathology are featured prominently in this unit. Highlights include the student's first hands-on experiences in the anatomy laboratory. Visual anatomy is featured during this unit by way of cadaver pro-section and three-dimensional models (Anatomage & Spectra Tables). In the 13-week CRP unit 2, students will explore the normal parameters of the cardiovascular and respiratory systems in conjunction with cardiologists, pulmonologists, acute care physicians, and other practicing specialists. The renal portion of the unit will focus on fluids, electrolytes, homeostatic mechanisms and the structure and function of the kidney. A major focus of the unit is the integration of the inter-regulatory mechanisms between these three systems, and how this impact the normal homeostasis and disease conditions. Several laboratory experiences are included to emphasize critical physiological concepts underlying the function of the cardiovascular respiratory, and renal systems. (15 credit hours).

ASMD 376 Foundations of Health, Disease, and Management II (FHDM II). This course is offered to first year medical students during the Spring semester and is designed to foster the rapid acquisition, integration, and application of scientific knowledge fundamental to the practice of medicine. Students will explore human health and disease within individual organ-system based units that are each organized into a series of 'clinical presentations' that reflect the major ways in which a person would present to a physician. This second semester course of Year 1 consists of three integrated units: 'Gastro-intestinal system (GIS); Endocrine-Reproductive systems (END-REP) & Hematologic System' (HEM). In the GIS unit, students will be introduced to the processes of motility, secretion, digestion, and absorption, which form the basis of function in the gastrointestinal system. The numerous functions of the liver will be presented including those that relate to intermediary metabolism, blood detoxification, plasma protein synthesis, and bile production, forming a basis for recognizing, understanding, and treating various diseases of the liver and hepato-biliary system. Within each of the clinical presentations, the pathology and etiologies of region-specific diseases are explained as they relate to the underlying basic science. In the END-REP unit, the basic information is provided for each clinical presentation including its clinical significance and a schematic representation of the relationships of the potential causes. These provide the basis for discussion of each of the underlying basic science principles. Each clinical presentation includes a set of basic science learning objectives related to the appropriate scientific concepts of anatomy, biochemistry, cell and molecular biology, embryology, genetics, histology, immunology, microbiology, nutrition, neuroscience, pathology, pharmacology and physiology. In the HEM unit, students will learn about the structure and function of the formed elements of blood as well as the components of blood plasma as they apply to health and hematologic diseases. Discipline experts provide instruction using various teaching methods including lectures, laboratories, and small group discussions. Both basic science and clinical faculty participate in this component of the instructional process. **(15 credit hours); Prerequisites: ASMD 375, FHDM I**

ASMD 492 Foundations of Health, Disease, and Management III (FHDM III). This first semester course of Year 2 consists of three integrated units: Central & Peripheral Nervous System Neuroscience (CPNS), Behavioral Health Psychiatry (PSYC), & Rheumatology-Dermatology (RhM-DERM). The sequence of Clinical Presentations (CPs) within each unit has been

structured so that the concepts developed during the study of one topic provide the foundation for subsequent topics. Basic information is provided for each CP including its clinical significance and a schematic representation of the relationships of the potential causes. These provide the basis for discussion of each of the underlying basic science principles. Each clinical presentation includes a set of basic science learning objectives related to the appropriate scientific concepts of anatomy (gross and neuroanatomy, including medical imaging), behavioral science, biochemistry, cell and molecular biology, embryology, genetics, histology, immunology, microbiology, nutrition, neuroscience, pathology, pharmacology and physiology. The PSYC unit spans the arc of human development from neonatology to geriatrics. The unit concludes with CPs that explore mental health and mental illness across the lifespan. Discipline experts provide instruction using various teaching methods including lectures, laboratories, and small group discussions. Both basic science and clinical faculty participate in this component of the instructional process. (15 credit hours); Prerequisites: ASMD 375, FHDM I; ASMD 376, FHDM II

ASMD 493 Foundations of Health, Disease, and Management IV (FHDM IV). This unit transitions logically from the preceding focus on the male and female reproductive systems and spans the arc of human development from neonatology to geriatrics. The unit concludes with CPs that explore mental health and mental illness across the lifespan. (4 credit hours); Prerequisites: ASMD 375, FHDM I; ASMD 376, FHDM II; and ASMD 492, FHDM III

ASMD 380 – Social Foundations of Medicine I (SFM I) This course focuses on developing the clinical reasoning skills of students, including the application of evidence-based medicine; increasing their knowledge of the complex interactions between patient health and the social structures in their communities; and applying the health coaching skills taught in the Medical Immersion Program. The course is organized into three interrelated modules. In the Clinical Reasoning module, students will develop scientific reasoning and critical thinking skills including the interpretation of biostatistics and epidemiological findings. The Population and Community Health module will explore the social determinants of health and introduce public health principles and strategies. Students, working in teams, will carry out a community assessment to identify the health-related resources and problems in Nashville utilizing observational research, public health databases, and community expert interviews. In the Health Coaching module, students will continue to develop their health coaching skills by interacting with clients in Meharry clinics and by phone. These coaching sessions will count towards the requirements for certification as a health coach. The course is designed to emphasize active learning and will utilize flipped classrooms, team-based learning, small groups, and self-directed learning. In addition to performance on quizzes and exams, students will be required to make oral and written presentations, and to submit documentation of health coaching encounters. (2 credit hours)

ASMD 381 – Social Foundations of Medicine II (SFM II) This is the second semester of a four-semester sequence. Social Foundations of Medicine II builds on the knowledge and skills developed in Social Foundations of Medicine I. Clinical Reasoning will introduce more advanced biostatistical tests and the core concepts and skills of evidence-based medicine. Topics will include analysis of scientific papers, interpretation of clinical research data, diagnostic screening interpretation and measurement of healthcare quality and patient safety. In Population and Community Health students will research community-based public health interventions related to a community need they have identified. In teams, they will develop and present a proposal for a community-based intervention. In the Health Coaching module, students will continue to develop their health coaching skills and to accrue clinical encounters towards the number required for certification. This course utilizes active learning techniques including flipped classrooms, small groups, team-based learning, and self-directed learning. In addition to performance on quizzes and exams, students will be required to make oral and written presentations, and to submit documentation of health coaching encounters. (2 credit hours). Prerequisite: ASMD 380, SFM I.

ASMD 494 – Social Foundations of Medicine III (SFM III) This course focuses on preparing the student to work within complex healthcare systems, to understand the ways the current healthcare system deals with special populations and healthcare issues and to apply standard tools for assessing quality and quality improvement in healthcare systems. Students will also continue the practicum phase of Health Coaching and will register for their certification examination. The course will utilize Team-Based Learning, expert panels, student projects, and client encounters. (3 credit hours). Prerequisite: ASMD 380, SFM I and ASMD 381, SFM II

ASMD 495– Social Foundations of Medicine IV (SFM IV) This course focuses on preparing the student to work as part of an interprofessional team to deliver patient-centered care utilizing information on factors affecting health behaviors. The course will utilize Team-Based Learning and an Interprofessional Team Training Activity. (1 credit hour). Prerequisite: ASMD 380, SFM II; ASMD 381, SFM II; and ASMD 494, SFM III

ASMD 385 Introduction to Medicine. An intensive six-week pre-clerkship program required for all incoming medical students in the fall semester that consists of four units: Emergency Medicine Introduction (EMI), Health Coaching (HC), HMX genetics and HMX physiology. Each unit has specific components which lead to understanding pathophysiology, genetics/genomics, physiology, and communication skills. The EMI and HMX courses will be an introduction and opportunity to prepare for the demanding coursework, time management and self-discipline of the medical school curriculum. The HMX online short courses allow students to learn fundamental concepts applied to health and disease. Upon successful completion of an HMX unit course, participants will receive a Certificate of Completion or, in the case of exceptional students, a Certificate of Achievement from the HMX System. To improve communication skills students will also complete online modules and live sessions in health coaching which will eventually lead to certification as a Health Coach (9 credit hours)

ASMD 420 – Board Review Course - The Board Review Course is an extended review of the basic sciences to prepare students to take the United States Medical Licensure Examination (USMLE) Step 1. 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 Step 1. 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. (14 credit hours)

ASMD 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: MSRE I 903; and completion of the CITI online training. (9 credit hours)

ASMD 50101, ASMD 50201, ASMD 50301 – Intersessions I – III - 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)**

ASMD 505 – Board Review Course - The Board Review Course is an extended review of the basic sciences to prepare students to take the United States Medical Licensure Examination (USMLE) Step 1. 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 Step 1. 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. **(14 credit hours)**

ASMD 602 – 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)**

ASMD 607- Medical and Research Ethics- The focus of this course is applied medical ethics in clinical, research and community environments. Course activities include both seminar instruction and clinical experience. Through active engagement with ethical issues in seminars, readings, and clinical settings, students will develop comprehension, applied problem-solving skills, and leadership skills in clinical and research ethics, as well as enhancing their ethical sensitivity to clinical encounters of all kinds. **Prerequisite: completion of pre-clinical courses (9 credit hours)**

ASMD 610 - Service Learning Elective- This is an opportunity for all medical students to provide a pedagogical framework in which students will engage in service learning in the community by providing service in response to community identified concerns and learn about the context in which service is provided, the correlation between service and their academic coursework, and their responsibility as citizens. Service-learning activities can occur at any time from matriculation until graduation and may occur longitudinally across academic years. **1 credit Hour (equivalent 200 service hours)**

ASMD 620 – Board Review Course - The Board Review Course is an extended review of the clinical disciplines to prepare students to take the United States Medical Licensure Examination (USMLE) Step 2 CK and CS. 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 Step 2. Students are encouraged to utilize these items daily 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 licensure. **(14 credit hours)**

ASMD 638 - SOM Public Health Elective - This course introduces public health theory and concepts, describing the scientific foundation of public health. It examines the purpose, history, organization, functions, activities, and outcomes of public health practice at the community, state, national, and global levels. Prominent historical events of public health and current day debates will open the student to the evolution of public health. This course provides an overview of the cornerstones of public health: epidemiology, biostatistics, environmental health, behavioral and community health,

and health policy. At the conclusion of this course, the successful student will have an appreciation for theoretical public health concepts and the foundations by which public health evolved into the comprehensive, applied health field it is today.

ASMD 903 and 904 – Medical Scholar Research Experience 1 (903) Fall and 2 (904) Spring– Through these courses each student undertakes a mentored and evaluated individualized hypothesis driven research project for one year. 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 Vanderbilt (or other institutions), pending approval. Students will present a description of their activities in a structured abstract along with a poster presentation. (ASMD 903- 9 credit hours) and (ASMD 904- 9 credit hours). Prerequisite: ASMD 311 Principles and Practices of Research; and completion of the CITI online training. ASMD 443 Medical Student Research Experience (MSRE)

ASMD 905 and 906 – Medical Scholar Research Experience 1 (905) Fall and 2 (906) Spring– Through these courses each student undertakes a mentored and evaluated individualized hypothesis driven research project for a second year. 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 Vanderbilt or other institution, pending approval. Students will present a description of their activities in a structured abstract along with a poster presentation. (ASMD 905- 9 credit hours) and (ASMD 906- 9 credit hours) Prerequisite: ASMD 903 and ASMD 904 – Medical Scholar Research Experience 1 (903) Fall and Medical Scholar Research Experience 2 (904) Spring

Clinical Sciences 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

FAMD 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)**

FAMD 600 – Fourth Year Ambulatory Family Medicine – This rotation is a four- week, community- based clinical experience designed to expose fourth year 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 FAMD 502 – Family Medicine Clerkship**

ELECTIVE COURSES

FAMD 602 - 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)**

FAMD 604 - Family Medicine Fourth Year Elective – This elective experience fully utilizes the abundance of ambulatory family and community health care settings available throughout Tennessee. The objective is to build upon the skills and knowledge previously gained progressively and systematically 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, to inculcate an adequate operational concept of health and illness management. **(9 credit hours)**

FAMD 613- Addiction Medicine- This course for fourth year medical students provides opportunities to explore the biopsychosocial approach for diagnosing patients and treatment of substance abuse disorders, especially opioid use disorder. Students will attain an introductory working knowledge of issues pertaining to direct patient care, administrative, and system-based practice in addiction medicine. This knowledge and practical experience will prepare students for future medical school rotations and residency training in addiction medicine or other primary care specialties. Clinical experiences take place in the Department of Family and Community Medicine's Medication Addiction Treatment (MAT) Clinic two days a week. Students are required to complete the MAT Waiver Training for medical students. Additional activities and locations may be utilized based on opportunities that arise during any given month-long rotation. These assignments will be issued at the discretion of the Program Director and core faculty. **Prerequisite: Successfully completion of all 3rd year medical student rotations. (9 Credit hours)**

DEPARTMENT OF INTERNAL MEDICINE

COURSE DESCRIPTIONS

MEDI 501 – Internal Medicine Clerkship – This is a 12-week core clerkship during which third- year medical students spend three weeks at various clinical sites affiliated with the Department of Internal Medicine. The students spend three weeks on each of the following services: general internal medicine service of the Nashville General Hospital, in-patient service at one of our affiliate hospitals (listed below), 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. Neurology is incorporated into Internal Medicine clerkship and consists of three weeks. This component teaches 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 occurs on the consultative neurology service and diagnostic testing at Nashville General Hospital and/or Sinai Grace Hospital (Detroit, MI), Broward Health Medical Center (Ft. Lauderdale, FL), Good Samaritan Health (Cincinnati, OH), Methodist Hospital (Memphis, TN) and HCA Southern Hills Hospital. **(27 credit hours)**

MEDI 600 – MS 4 Ambulatory Internal Medicine – This is a four-week elective with a primary focus for the student to gain advanced fundamental clinical knowledge and skills to increase diagnostic and management acumen in outpatient management of young adults to geriatrics and to further the knowledge of students concerning community resources and their integration in the management of the patient holistically. Students will become familiar with appropriate drug usage and side effects. Students will increase communication skills between patients and their families and other healthcare providers. (9 credit hours) Prerequisite: MEDI 501-Internal Medicine Clerkship

MEDI 603 – MS 4 Internal Medicine - This is a four-week clerkship for fourth year medical students, which may be served at either Nashville General Hospital at Meharry. 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 fourth year 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 fourth-year 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 fourth year medical students, which may be served at either Nashville General Hospital at Meharry. 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 fourth-year internal medicine requirement. **(9 credit hours)** Prerequisite: **MEDI 501 – Internal Medicine Clerkship.**

ELECTIVE COURSES

MEDI 620 – Cardiology Elective – This course is designed to familiarize fourth year 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 consultation 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 – 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. Students 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)**

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 – Fourth year 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 chemotherapist, 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 calls. A faculty preceptor is assigned to the student for regular supervision. **(9 credit hours) Prerequisite: MEDI 501 – Internal Medicine Clerkship**

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)**

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

COURSE DESCRIPTIONS

OBGY 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)**

OBGY 600 – Obstetrics & Gynecology Ambulatory - The ambulatory course in obstetrics and gynecology is to reinforce competence in medical history and physical examination taking into account the female patient's social, demographic, ethical, and culturally significant factors. This outpatient course is structured to provide ample opportunity for the senior student to apply learned measures to assess and manage the female patients concerns. The student will develop strength in evaluating and managing common obstetrical and gynecological problems, the menstrual cycle, family planning, and sexual health care needs. The student will be introduced to a range of patients and become familiar

with female health care from preconception through menopause. The goal is for the student to identify and evaluate patient concerns and to develop strength in management and treatment plans for health maintenance. **(9 credit hours)**

Prerequisite: OB/GYN 501 – Obstetrics and Gynecology Clerkship. Preceptor – Clerkship Director

OBYG 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 fourth-year 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**

OBYG 603 – Labor and Delivery - Over a four-week period, students engaged in this elective will be exposed to all aspects of labor and delivery. Students will participate in both day and night calls, management of the labor process, vaginal deliveries and cesarean sections. Students will be expected to round on patients in the postpartum period. Students will participate in all resident didactic sessions for the four-week period. Students will also be expected to present an American College of Obstetrics and Gynecology Practice Bulletin to the department as part of the final grade. **(9 credit hours)** **Prerequisite: OB/GYN 501 - Obstetrics and Gynecology Clerkship**

OBYG 606 – Gynecological Surgery Elective - This is a four-week course which has an emphasis on gynecological surgical procedures. Over a four-week period the student will be assigned to various operative procedures two to three days per week and to gynecological clinic. The students will participate in all pre-operative inpatient and outpatient rounds and preparation. The student will be expected to follow the patient throughout the rotation. The student will be introduced to an operative approach and methods to include open and laparoscopic procedures. The student is expected to participate in all resident didactics, pre-operative conferences, morbidity and mortality rounds, and pathology presentations. It is expected that the student will be introduced to a wide range of gynecological surgical procedures for both benign and malignant conditions. Students will also be expected to present an American College of Obstetrics and Gynecology Practice Bulletin to the department as part of the final grade. **(9 credit hours)** **Prerequisite: OB/GYN 501 – Obstetrics and Gynecology Clerkship. Preceptor – Clerkship Director**

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

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)**

PATH 602- Surgical Pathology- This four-week course for fourth year medical students is designed to provide students with an understanding and appreciation of the central role of the surgical pathologist in patient management based on evaluations of tissue samples, including biopsies, fine needle aspirates, and cytology, removed for diagnostic purposes, and organs or portions of organs removed during surgery procedures. During this rotation, the student will participate in the surgical pathology rotation at Nashville General Hospital and will experience the spectrum of responsibilities of a surgical pathologist including interactions with clinicians. The student will work closely with the attending pathologist on service. This elective is only for students applying for pathology residency. **Prerequisite: Successfully completion of all 3rd year medical student rotations. (9 Credit hours)**

PATH 605- Forensic Pathology- This four-week course is designed to help fourth year medical students apply medical knowledge and gain diagnostic skills to diagnosis a cause of death. The course will cover the following topics: use of autopsy and microscopic techniques to delineate the cause of death, medical legal issues in reporting certain deaths, role of medical examiner, identifying factors to distinguish the cause of death, and proper techniques for photographs, documentation and preservation of evidence. Training will take place at the Davidson County Medical Examiners' office. This is only for students applying for pathology residency. **Prerequisite: Anatomy, and preference 3rd year clerkships. (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 department's intent is to imbue students with a propensity and readiness for the application of basic science principles in the analysis and study of clinical problems as presented by pediatric patients.

COURSE DESCRIPTIONS

PEDI 501 - Pediatric Clerkship: Over a period of eight weeks, students are assigned to clinical duties in both outpatient and inpatients settings. Students work with patients who have been admitted to inpatient settings at Nashville General Hospital, Vanderbilt Children's Hospital, Children's of Alabama in Birmingham, LeBonheur Children's Hospital in Memphis, and Children's Hospital of Michigan in Detroit. They also see patients in the Meharry Pediatric Clinic and other outpatient settings. Students have the opportunity to perform Clinical Laboratory Improvement Amendments (CLIA)-waivered 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 will engage in certain unique supplementary diagnosis and therapeutic exercises as they study the problems that the patient presents. Apart from formal lectures by the faculty on common pediatric problems, small group conferences are held - preferably at the bedside, and at that time the student's work and understanding of the patient's disease processes are discussed and evaluated. Demonstrations of the techniques for 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 provided with computerized cases, while simulations allow for procedural techniques to be perfected. **(18 credit hours)**

ELECTIVE COURSES

Electives in pediatrics are available to fourth year medical students. These electives may be tailored to suit students desiring to increase their expertise in ambulatory, primary care, the newborn intensive care unit (NICU), or research. The student must submit personal goals and objectives of skills and knowledge they foresee obtaining from these electives.

PEDI 600 – Fourth-Year Ambulatory Pediatrics: During this four-week elective, students will advance their fundamental clinical knowledge and skills, increase their diagnostic and managerial acumen in children ranging from birth through adolescence, and further the knowledge of community resources – all of which will be integrated to holistically manage patients. Students will also provide instruction and leadership to third-year students who are rotating in the ambulatory clinic. **Prerequisite: PEDI 501. (9 credit hours)**

PEDI 602 – Pediatric Elective (Behavioral Pediatrics): During this four-week elective, students will advance their knowledge of developmental and behavioral disorders found within the pediatric and adolescent populations. Students will be involved at various stages of the treatment process, including making treatment recommendations. Students will also provide instruction and leadership to third-year students who are rotating in the behavioral clinic. **Prerequisite: PEDI 501. (9 credit hours)**

PEDI 605 - Pediatric Research: This elective is offered to students who are interested in additional exposure to research in the pediatric age group. Students are expected to complete a CITI program for research, participate in a chart and/or literature review, and submit required research paper/abstract suitable for oral or poster presentation. If time permits, they must write a proposal that is to be IRB-approved. Depending on the length of the research project, the faculty PI will obtain IRB approval. This elective must be prearranged between the student and a clinical faculty researcher in the field of pediatrics and approved by the clerkship director in the Department of Pediatrics. **Prerequisite: PEDI 501. (9 credit hours)**

PEDI 606 - Pediatric Neonatal ICU (Newborn Nursery): This course provides students with clinical care experience in the Nashville General newborn nursery. Students must submit personal goals and objectives for this course, which focuses on didactics and clinical management of all newborns, including premature infants and infants with congenital anomalies. Students learn interdisciplinary approaches to the neonate and discern growth, development, complications due to prematurity, and other components of caring for premature infants. Students will also provide instruction and leadership to third-year students who are rotating in the newborn nursery. **Prerequisite: PEDI 501. (9 credit hours)**

PEDI 609 – Ambulatory Adolescent Medicine: This is a four-week elective that provides students with the opportunity to advance their gynecological skills within the adolescent age group. The elective is spent in Meharry's adolescent and ambulatory clinics. This elective focuses on increasing skills in the physical exam and sexual history taking, as well as improving diagnostic acumen and the management of adolescents presenting with GYN issues and STI. Students will also provide instruction and leadership to third-year students who are rotating in the adolescent and ambulatory clinics. **Prerequisite: PEDI 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 third-year 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 and Tennessee Christian Medical Center. **(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 607 – Child & Adolescent- This is a four-week elective. This elective is to introduce senior medical students to inpatient child and adolescent services; provide foundation for those with an interest in child and adolescent psychiatry. Offered at the Richmond, VA Veterans Affairs Hospital location.

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 considering health care reform and cost containment.

COURSE DESCRIPTIONS

RADI 601 - Fourth Year Radiology Clerkship - This is a four-week required clerkship that is offered monthly. The format includes lectures and presentations that are held remotely, four hours each morning, which includes asynchronous learning. 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 monthly to students in their fourth 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. **(9 credit hours) Prerequisite: RADI 601 - Fourth Year Radiology Clerkship**

DEPARTMENT OF SURGERY

COURSE DESCRIPTIONS

SURG 501 – Surgery Clerkship - The third-year surgical clerkship is scheduled 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 other affiliated institutions. Principles of acute trauma life support are incorporated into the rotation. Students are exposed on a rotating basis to evening calls, outpatient clinic, inpatient and the emergency room. In this role, they serve as a training 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 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 616 - General Surgery - This fourth-year elective rotation is four weeks in duration and can be taken upon successful completion of the third-year clerkship. The experience is designed to approximate that of an intern and consists of assignments to the operating room, outpatient clinics and inpatient service. The 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 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 639 – 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 640 - Vascular Surgery - Senior surgery 1 month elective in Vascular Surgery with outpatient, inpatient, special procedures, and operating room experience. This 4-week elective will promote the student's attainment of vascular surgical knowledge base, introduce the student to vascular surgical procedures, facilitate understanding of a surgical approach to clinical problem solving, promote acquisition of vascular surgical diagnosis and management capabilities and promote the continued development of the student's professional attitudes and behavior. **(9 credit hours) Prerequisites: MEDI 501- Internal Medicine and SURG – 501 – Surgery Clerkship**

School of Medicine Faculty

Basic Sciences Departments

Department of Biochemistry / Cancer Biology / Neuroscience /Pharmacology

Pharmacology Chairperson: Samuel E. Adunyah, Ph.D., Professor

Professors: Zhenbang Chen, Ph.D.; Sanika S. Chirwa, Ph.D.; Sukhbir S. Mokha, Ph.D.; Josiah Ochieng, PhD.; Anil Shanker, Ph.D.; LaMonica Stewart, Ph.D.; Aramandia Ramesh, Ph.D.

Associate Professors: Shawn J. Goodwin, Ph.D.; Olugbemiga Ogunkua, M.D., Ph.D.; Deok-Soo Son, D.M., Ph.D.; Jamaine Davis, Ph.D.

Assistant Professors: Alla Ivanova, Ph.D.

Instructor: Thanigaivelan Kanagasabai, Ph.D.; Guoliang Li, Ph.D.

Professor Emeritus: Cleve Charlton, Ph.D., Salil K. Das, Ph.D., Manuel Valenzuela, Ph.D.

Department of Microbiology / Immunology / Physiology

Chairperson: Chandravanu Dash, Ph.D., Professor

Professors: Minu Chaudhuri, Ph.D.; Z Xinhong Dong, Ph.D.; Zhongmao Guo, M.D., Ph.D.; Bindong Liu, Ph.D.; Evangeline D. Motley- Johnson, Ph.D.; Hong Yang, M.D., Ph.D.

Associate Professors: Donald Alcendor, Ph.D.; Anthony Archibong, Ph.D.; Pius Nde, Ph.D.; Siddarth Pratap, Ph.D.; Byeongwoon Song, Ph.D.

Assistant Professor: Dorin B. Borza, Ph.D.; Girish Rachakonda, Ph.D.

Instructors: Emmanuel Okoro, M.D.;

Secondary Appointment: Hua Xie, Ph.D., Professor

Professor Emeriti: Etheleen M. Hill, Ph.D.; Fred Jones, Ph.D.; Hubert K. Rucker, Ph.D.

Department of Professional and Medical Education

Chairperson: Sekina Eltom, D.V.M., Ph.D.; Professor

Division of Integrated Didactics:

Professors: Emmanuel Atta-Asafo-Adjei, Ph.D.; Alfred A. Nyanda, Ph.D.; Edilberto A. Raynes, M.D., Ph.D.

Associate Professors: Carolyn Szetela, Ph.D.;

Assistant Professors: Anita Austin, Ph.D.; Shalonda Ingram, Ph.D.; Andrew Hillman, M.D.; Terri Robinson, Ph.D., MPH; Tiffany M. Turner, Ph.D.;

Instructors: Newton J. Ford, M.D.; Jenny M. Ousley, M.D.

Adjunct Assistant Professor:

Division of Clinical Skills and Competencies:

Professors: David McClario, D.O., MS

Assistant Professors: Mary Gerges M.D.; Linda Plummer, M.D.; Michael Rhodes, M.D.; Alfred Shaw, M.D.; Binah baht Ysrayl, Ph.D., M.D.; Adrienne Hicks, M.S.N. NP-C

Clinical Departments**Department of Family and Community Medicine**

Chairperson:

Professors: Vincent Morelli, M.D.; Maureen Sanderson, Ph.D.; Tammy Henderson, PhD.

Associate Professors: Wansoo Im, PhD.; Robert Cooper, PhD.; Sylvia Akohoue, PhD.;

Assistant Professors: Michelle R. Etling, Ph.D., M.D.; Ashley Hicks, M.D.; S.L. Lampkin, IV, M.D.; Jayashree Nathan, M.D.; Fatima B. Syed, M.D.; Michael Rhodes, Jr, M.D.

Adjunct Associate Professors: Scott Woods, M.D.

Adjunct Assistant Professors: Robert G. Bishop, M.D.; Marketta R. Blue, M.D.; Ben Andrews, M.D.; Melissa Barnhart, M.D.; Joel Finley, M.D.; Prakhya Bhatnagar, M.D.; Ronya Green, M.D.; Lorraine Charkes, M.D.; Rosabel Manalo, M.D.; Corey Batson, M.D.; Naeemah Munir, M.D.; Adrian Mancheno, M.D.

Adjunct Clinical Instructors: Jonathan Verdell, M.D.; Joseph Patrick, M.D.; Brandon Edwards, M.D.; Susan Nelson, M.D.; Shelia Thomas, M.D.; William Wallace, M.D.; Melissa Fullerton, M.D.; G. Scott Morris, M.D.; Veronica Swannigan, M.D.; Meredith Walsh, FNP

Department of Internal Medicine

Chairperson: Chike M. Nzerue, M.D., MBA, FASN

Professors: Vladimir Berthaud, M.D.; James E. K. Hildreth, Ph.D., M.D.

Associate Professors: Richmond Akatue, M.D.; Nader S. Bahri, M.D.; Michael Caldwell, M.D.; Monique Forskin Duncan, M.D.; Richard Fremont, M.D.; Livette Johnson, M.D.; Pradumna Singh, M.D.; Nandakumar Vittal, M.D.; Alyssa Saelens, MD

Assistant Professors: Tiwalade Y. Awosanya, M.D.; Wade Brown, MD; Janet George, M.D.; Ethel P. Harris, D.D.S.; Heran Mengesha, M.D.; Sunday D. Ogunde, M.D.; Julia Ngo, M.D.; Calvin M. Smith, III, M.D.; Wade Brown, M.D., Christina Sadlow,

Clinical Instructor:

Faculty Emeritus: Marquette Faulkner, M.D., M.B.A.

Professor Emeritus: James Potts, M.D.

Adjunct Professors: Benedict Malaikhal, MD; Enawgaw Mehari, MD; Robin Womedu, MD;

Adjunct Associate Professors: Alfred S. Callahan, M.D.; Walter Clair, M.D.; Lawrence S. Lackey, Jr., M.D.; Matt Parks, MD; Jerry Gilles, MD;

Adjunct Assistant Professors: Adejoke Aina-Babalola, M.D.; Malek H. Al-Omary, M.D.; Al-Muntaser B. Abu-Ali, M.D.; Robert J. Berkompas, M.D.; Harvey Bowles, M.D.; Bradley P. Carter, M.D.; Capt. Thomas R. Cervone, D.O.; Malitha Hettiarachchi, M.D.; Darryl L. Jordan, M.D.; Dojendra Karkee, M.D.; Furrukh S. Malik, M.D., Francisco Mayorquin, M.D.; Abu Fazal Shaik Mohammed, M.D.; Uchenna Okeke-Nnamah, M.D.; Sareda Nur, M.D.; Henry Okafor, M.D.; Mehdi Pourmorteza, D.O.; Nagendra Ramanna, M.D.; Vonda G. Reeves-Darby, M.D.; Payal Shah, M.D.; Idowu Uzzi, M.D., MPH; Febe I. Wallace, M.D., Christopher A. Wells, M.D., Ph.D.; Mene S. Zua, M.D., Oluwumi Ayo Akatue, M.D. FACP, Kristal Reed, MD, Tanzania Dooley, MD; Tamika Wilson, MD, Patricia Rowe-King, MD, Christina Savu, MD, Yash Rangan, MD; Michael Baron, MD; Julie Bastarache, MD; Matt Parks, MD; Jerry Gilles; Joseph Akamah, MD; Fathi Ali, MD; Subha Chatra, MD; Alex Chinn, MD; Camelia Chirlescu, MD; Claudia Cox, MD; Jennifer Delzell, MD; Chidi Egwim, MD; John Eick, MD; Taylor Jenkins, MD; Leigh Livingston, DO; Richard Lyn-Cook, MD; Suresh Nekuri, MD; Ursula Norfleet, MD; Jared Pack, MD; Amruta Panwala, MD; Milton Penn, MD; Bradley Richmond, MD; Jorge Rodriguez, MD; Srishti Sareen, MD; Shelby Shamas, DO; Thad Snyder, MD; Dennis Starr, MD; Farida Thanawalla, MD; Timothy Thayer, MD; Krista Volberding, MD; Michael Womack, MD

Department of Obstetrics and Gynecology
Chairperson:

Professors: Edward Hills, M.D.;

Associate Professors: Phillip Bourne, M.D.; Ahsen Chaudhry, M.D. Angelica Garrett Wood M.D.; Jamie L. Ware, M.D.

Assistant Professors: Donald Bruce, M.D.; Vernita Tucker, M.D.; Ronald D. Dudek, M.D.

Professor Emeritus:

Adjunct Professors: Jamie Vasquez, M.D.

Adjunct Associate Professors: Lanetta Coleman, M.D.; Melvinie Seymore-Lee, M.D.; Joseph Santoso, M.D.; Claudette Jones Shepard, M.D.; Anthony Archibong, Ph.D.; Donald Alcendor, Ph.D.

Adjunct Assistant Professors: Damaris Olagundoye, M.D.; Elosa Johnson, M.D.

Department of Pathology

Chairperson: Sanford Barsky, M.D.; Professor

Professors: Billy Ray Ballard, M.D., D.D.S.; Digna Forbes, M.D.

Associate Professors: Dana Marshall, Ph.D.

Department of Pediatrics

Chair: Xylina D. Bean, M.D., Professor

Professors: Shahana A. Choudhury, M.D.; Olayinka O. Onadeko, M.D.

Associate Professors: Christopher J. Keefer, M.D.

Assistant Professors: Dontal L. Johnson, M.D.; Theodora P. Pinnock, M.D.; Kimberlee Wyche-Etheridge, M.D.
MPH

Adjunct Professors: Hussein D. Abdul-Latif, M.D.; David J. Askenazi, M.D., MSPH; Mitchell B. Cohen, M.D.; Daniel I. Feig, M.D., Ph.D., MS; Hector Gutierrez, M.D.; Sahar Fathallah-Shaykh, M.D.; Wynton C. Hoover, M.D.; Kimberly F. Whelan, M.D., MSPH

Adjunct Associate Professors: Helen G. Beeman, M.D., M.H.P.E., F.A.A.P.; Stephanie Berger, M.D., F.A.A.P.; Traci W. Jester, M.D.; Jeffrey Lebensburger, DO; Lauren K. Nassetta, M.D.; Paul S. Scalici, Jr., M.D.; Michael E. Seifert, M.D., MSCI; Erin Shaughnessy, M.D., MSHCM, FAAP; Robert B. Troxler, M.D.

Adjunct Assistant Professors: Kristin A. Bettin, M.D., M.Ed., F.A.A.P.; Desirée Burroughs-Ray, M.D., M.P.H.; Emily McDanal Casey, M.D.; Samori Cummings, M.D.; Emilee A. Dobish, M.D. F.A.A.P.; Kenice D. Ferguson-Paul, M.D.; Meghan E. Hofto, M.D., M.P.H., F.A.A.P., DTM&H; Margreete G. Johnston, M.D.; Rachel Kassel, Ph.D.; Elisha M. McCoy, M.D.; Adolfo L.

Molina, M.D., M.S.H.Q.S.; Maya K. Neeley, M.D.; Mary Orr, M.D., M.P.H., F.A.A.P., DTM&H; Stephen D. Pishko, M.D.; Nathaniel G. Rogers, M.D.; Nichole P. Samuy, M.D. F.A.A.P.; Erinn O. Schmit, M.D., M.Ed., F.A.A.P.; Kimbel Shepherd, M.D.; Cassandra Smola, M.D.; Daniel R. Wells, M.D.; Ida M. Williams, M.D.; Tiffney M. Widner, M.D.; Jeffrey C. Winer, M.D., M.A., M.S.H.S., F.A.A.P.; Chang L. Wu, M.D.; Anthony Zanni, M.D.

Department of Psychiatry and Behavioral

Chairperson: Peter E. Millet, Ph.D. (interim)

Professor: Peter E. Millet, Ph.D.

Associate Professor: Jason Cheng, M.D.

Assistant Professors: Osamudiamen Osa-Edoh, M.D., MPH; James McKenzie, D.O., MBA

Professor Emeritus: Harold Jordan, M.D.

Associate Professor Emerita:

Adjunct Associate Professors:

Adjunct Assistant Professors: Edwin D. Williamson, M.D.

Department of Surgery

Chairperson:

Professor: Flora Ukoli, M.D., D.P.H.

Associate Professors: Bolanle A. Asiyabola, M.D.; Stephania Miller, Ph.D.; Carlton Adams, M.D.

Assistant Professors:

Associate Professor Emeritus: Alphonse Pasipanodya, M.D.

Adjunct Professors: Jeffery Dattilo, M.D.; Marc Horton, M.D.; Muhammad Jaffar, M.D.; Brian J. O'Neil, M.D.; Joel Rush, M.D.; Steven Theiss, M.D.; Rahul Vaidya, M.D.

Adjunct Associate Professors: Shaheen Alanee, M.D.; Jeffrey Clark, M.D.; Mohamed Ismaeil, M.D.; Velji Kansara, M.D.; Colin Martin, M.D., FACS; Ryan Martinez, M.D.; Ivan Puente, M.D.;

Adjunct Assistant Professors: Lajon Addison, D.O.; Abubakar Ali, M.D.; Suhail Allos, M.D.; John Barnwell, M.D.; Julia Boll, M.D., RPVI, FACS; Eugene Brabston, III, M.D.; Angeline Brunetto, M.D.; Jaime Bryan, M.D.; Erin Buczek, M.D.; DeAnn Bullock, M.D.; Paul Butts, M.D.; Mark Byram, M.D.; Britney Corey, M.D., FACS; Steve Dunay, M.D.; Phillip Elizondo, M.D.; JimBob Faulk, M.D., FACS, RPVI; Jessica Fazendin, M.D.; Drew Flansbaum, M.D.; Angela Gaskin, M.D.; Khatchadour Hamamdjian, M.D.; Benjamin Heavrin, M.D.; Laszlo Hoesel, M.D.; Kevin Hogan, M.D.; Matthew Katz, M.D.; Lawrence Kleuser, M.D.; Sarkis Kouyoumijia, M.D.; Rachael Lancaster, M.D.; Brenessa Lindeman, M.D.; Jeffrey Livingston, M.D.; Chine Logan, D.O.; Clinton Marlar, M.D.; M. Caroline Nally, M.D.; Ursula Norfleet, M.D.; Erik Olsen, M.D.; Benjamin Pearce, M.D.; Drew Reynolds, M.D.; Detrop Seman, Joseph Sherer, D.O.; M.D.; Suzanne Smith, M.D.; Ivan Stoev, M.D., FAANS; Daniel Taylor, M.D.; Melinda Turner, M.D.; Marc Anthony Velilla, M.D., FACEP; John Whittaker, M.D.; Andrew Wiggins, M.D.; Patrick Wolf, M.D.

Instructors: Alexandra North Myers, PA-C

Molina, M.D., M.S.H.Q.S.; Maya K. Neeley, M.D.; Mary Orr, M.D., M.P.H., F.A.A.P., DTM&H; Stephen D. Pishko, M.D.; Nathaniel G. Rogers, M.D.; Nichole P. Samuy, M.D. F.A.A.P.; Erinn O. Schmit, M.D., M.Ed., F.A.A.P.; Kimbel Shepherd, M.D.; Cassandra Smola, M.D.; Daniel R. Wells, M.D.; Ida M. Williams, M.D.; Tiffney M. Widner, M.D.; Jeffrey C. Winer, M.D., M.A., M.S.H.S., F.A.A.P.; Chang L. Wu, M.D.

Department of Psychiatry and Behavioral

Chairperson: Lloyd W Williamson, M.D., Professor

Professor: Peter E. Millet, Ph.D.

Associate Professor: Bryan Heckman, Ph.D.

Assistant Professors: Jason Cheng, M.D.;

Professor Emeritus: Harold Jordan, M.D.

Associate Professor Emerita:

Adjunct Associate Professors: Rokeya S. Farooque, M.D.;

Adjunct Assistant Professors: Katherine Anne Legare, M.D.; Edwin D. Williamson, M.D.;

Department of Surgery

Chairperson: Carlton Z. Adams, M.D., Associate Professor

Professor: Flora Ukoli, M.D., D.P.H.

Associate Professors: Bolanle A. Asiyanbola, M.D.; Stephanie Miller, Ph.D.

Assistant Professors: Muiwa Adedokun, M.D.;

Associate Professor Emeritus: Alphonse Pasipanodya, M.D.

Adjunct Professors: Jeffery Dattilo, M.D.; Marc Horton, M.D.; Muhammad Jaffar, M.D.; Brian J. O'Neil, M.D.; Joel Rush, M.D.; Steven Theiss, M.D.; Rahul Vaidya, M.D.

Adjunct Associate Professors: Shaheen Alanee, M.D.; Jeffrey Clark, M.D.; Mohamed Ismaeil, M.D.; Velji Kansara, M.D.; Colin Martin, M.D., FACS; Ryan Martinez, M.D.; Ivan Puente, M.D.;

Adjunct Assistant Professors: Lajon Addison, D.O.; Abubakar Ali, M.D.; Suhail Allos, M.D.; John Barnwell, M.D.; Julia Boll, M.D., RPVI, FACS; Eugene Brabston, III, M.D.; Angeline Brunetto, M.D.; Jaime Bryan, M.D.; Erin Buczek, M.D.; DeAnn Bullock, M.D.; Paul Butts, M.D.; Mark Byram, M.D.; Britney Corey, M.D., FACS; Steve Dunay, M.D.; Phillip Elizondo, M.D.; JimBob Faulk, M.D., FACS, RPVI; Jessica Fazendin, M.D.; Drew Flansbaum, M.D.; Angela Gaskin, M.D.; Khatchadour Hamamdjian, M.D.; Benjamin Heavrin, M.D.; Laszlo Hoesel, M.D.; Kevin Hogan, M.D.; Matthew Katz, M.D.; Lawrence Kleuser, M.D.; Sarkis Kouyoumijia, M.D.; Rachael Lancaster, M.D.; Brenessa Lindeman, M.D.; Jeffrey Livingston, M.D.; Chine Logan, D.O.; Clinton Marlar, M.D.; M. Caroline Nally, M.D.; Ursula Norfleet, M.D.; Erik Olsen, M.D.; Benjamin Pearce, M.D.; Drew Reynolds, M.D.; Detrop Seman, Joseph Sherer, D.O.; M.D.; Suzanne Smith, M.D.; Ivan Stoev, M.D., FAANS; Daniel Taylor, M.D.; Melinda Turner, M.D.; Marc Anthony Velilla, M.D., FACEP; John Whittaker, M.D.; Andrew Wiggins, M.D.; Patrick Wolf, M.D.

Instructors: Alexandra North Myers, PAs

School of Applied Computational Sciences

Administration

Founding Dean; Fortune Mhlanga, Ph.D.

Associate & Assistant Deans

Associate Dean of Business and Finance; Alessandra Jones, MBA
Associate Dean for Academic Affairs; Timothy L. Wallace, Ph.D.
Associate Dean for Curriculum Evaluation & Effectiveness; Lei Qian, Ph.D.
Associate Dean for Research & External R&D Partnerships; Todd Gary, Ph.D.
Assistant Dean of Admissions and Student Affairs; JeanLuc Nshimiyimana, M.Ed.
Assistant Dean of Communications and Digital Marketing; Matt Anderson

Department Chairs

Department of Computer Science and Data Science, Sajid Hussain, Ph.D.
Department of Biomedical Data Science, Aize Cao, Ph.D.

Program Coordinators

Ph.D. Biomedical Data Science; Abdullah A. Mamun, Ph.D.
Ph.D. Data Science; Firdous Kausar, Ph.D.

Master's in Artificial Intelligence; Subash Neupane, Ph.D.
Master's in Bioinformatics; Ashutosh Singhal, Ph.D.
Master's in Biomedical Data Science; Nazirah Mohd Khairi, Ph.D.
Master's in Computer Science; Mohammad M.R. Khan, Ph.D.
Master's in Cybersecurity and Assurance; Uttam Ghosh, Ph.D.
Master's in Data Science, Puspita Chatterjee, Ph.D.

Certificate in Biomedical Data Science; Benu Bansal, Ph.D.
Certificate in Data Science; Asmah Muallem, Ph.D.

Program Coordinators

Ph.D. Biomedical Data Science; Abdullah A. Mamun, Ph.D.
Ph.D. Data Science; Firdous Kausar, Ph.D.

Master's in Artificial Intelligence; Subash Neupane, Ph.D.
Master's in Artificial Intelligence & Entrepreneurship; Somayeh B. Ramezani, Ph.D.
Master's in Bioinformatics; Ashutosh Singhal, Ph.D.
Master's in Biomedical Data Science; Nazirah Mohd Khairi, Ph.D.
Master's in Computer Science; Mohammad M.R. Khan, Ph.D.
Master's in Cybersecurity and Assurance; Uttam Ghosh, Ph.D.
Master's in Data Science, Puspita Chatterjee, Ph.D.

Certificate in Biomedical Data Science; Benu Bansal, Ph.D.

Certificate in Data Science; Md Kamruzzaman, Ph.D.

Certificate in AI and Data Analytics for Health Systems; Asmah Muallem, Ph.D.

Certificate in Bioinformatics & Genomics Data Foundations; Benu Bansal, Ph.D.

Certificate in Cybersecurity for Health & Medical Data; Firdous Kausar, Ph.D.

Administration & Staff

Christian Neal, Executive Associate, Dean's Office

Byonca Patrick, Administrative Assistant Senior, Department of Biomedical Data Science

Jasmine S. Meriwether, Administrative Assistant Sr, Department of Computer Science & Data Science

Imam Bakhsh, Program Manager

Myles Hamilton, Financial Coordinator

Strategic Professional Development and Enrollment Management

JeanLuc Nshimiyimana, Assistant Dean of Admissions and Student Affairs
Te'Onnika Hollowell, Student Recruitment and Admissions Specialist

Communications and Marketing

Matt Anderson, Comm & Digital Marketing Dir, SACS & EDA
Carmen Campbell, Digital Content Specialist
Ankith Cirgir, Web Application Developer
Quaker Manuel, Web Developer

External Research and Development Partnerships

Todd Gary, Associate Dean, External Research and Development Partnerships
David Lockett, M.Ed., Grants Proposal Development and Awards Management Specialist

Computational Sciences Education at Meharry

A primary goal of Meharry Medical College (MMC) is to create, deliver, and maintain a position of national excellence in Historically Black Medical Colleges (HBMCs) and Historically Black Colleges and Universities (HBCUs) higher education. Like other higher education institutions, MMC has set itself on a path to expand and enhance its offerings in computational science disciplines, the result of which is to attract more students as well as a higher caliber of students to solve complex problems in healthcare, especially those that face the nation's underserved populations. Computational science, which includes data science, focuses on using advanced computing capabilities to understand and solve complex problems. Data science is a subset of computational science that focuses on extracting knowledge and insights from massive amounts of data. This involves capturing, aggregating, and analyzing disparate types of data (for example, biomedical data), recognizing patterns and trends within that data, and communicating results. Data science leverages predictive analytics which is particularly useful when trying to determine optimal strategies for an array of objectives: business growth, epidemiological trajectories, economic forecasts, etc. If we can predict behaviors of various factors in our environments, then we are better able to decrease the risk of disastrous outcomes.

Underpinning the MMC mission and its overall goal of excellence is a strategy to collaboratively enhance and grow its focus on computational sciences, and to attract additional top-talent students in these fields. To help achieve its primary goal, MMC formally launched its Data Science Institute (DSI) in fall 2018.

Beginning spring 2021, the DSI was transitioned and elevated to School status. It was renamed the School of Applied Computational Sciences (SACS), which became the fourth and first school on the MMC campus in about 80 years!

The SACS serves as the focal point for academic training and research in computational sciences. While technological training occurs within other academic and operational units of MMC, the SACS is now the "educational face" of technology on the MMC campus.

Overall Goal (Vision) of the SACS

Consistent with the primary goal of MMC, i.e., its commitment to enhancing its national reputation and expanding its global reach as a quality-driven academic health institution, the primary goal (or vision) of the SACS is to be recognized for its impact on society.

The SACS will actively foster a culture of discovery, learning, engagement, and personal growth that is inclusive of, and supports, all elements of MMC. Through its educational programs, scholarships, and service to the community, it will continually seek to empower individuals and organizations to improve the quality of life for people around the world through the application of computational sciences.

Overall Purpose (Mission) of the SACS

A primary purpose of the SACS is to fuel growth in enrollment, specifically enrollment of top-talent students. The programs offered by the SACS broaden the educational opportunities of all MMC students, by offering more curriculum choices, particularly those seeking careers in the computational sciences arena. The SACS also provides MMC with an opportunity to positively impact regional economic development in ways that have previously not been possible and to forge new relationships with the local community and industry.

Pursuant to this, the mission of the SACS is to advance scholarship in key domains of computational sciences, to its graduate students, by **innovating** through academic excellence and impactful research that will enhance the healthcare and technology communities in Nashville and beyond, **connecting** to key healthcare industries, business, influencers, and thought leaders in the areas of computational science, and **serving** the technology community as well as society at large.

The above mission statement articulates the “SACS Brand Mantra” or the “heart and soul” that captures the irrefutable essence or spirit of the SACS brand positioning: *Innovating, Connecting, and Serving*.

Research & Development

An integral component of the SACS is its Research & Development (R&D) unit. Consistent with its overall vision and mission, SACS's R&D mission is to develop and deploy impactful and socially responsible scientific knowledge and practical technologies that empower society to improve the quality of life.

To achieve its R&D mission as a contribution towards the realization of its overall vision, SACS has set the following objectives:

- Build and sustain strategic research clusters of excellence that leverage existing SACS strengths in computational sciences.
- Promote alignment and optimization of graduate programs, with respect to the strategic research clusters, to expand research opportunities and resources that attract and support a robust number of research fellows.
- Promote research-based learning through systematic integration of research experiences into the curriculum.
- Seek additional deep intellectual and mutually beneficial partnerships with a broad range of departments on the MMC campus.
- Establish close relationships and set up collaborative projects with institutions and professional entities involved in the computational sciences arena in Middle Tennessee and beyond.
- Establish the Advanced Computing and Analytics Laboratory (ACAL) as an integral component of SACS R&D. The ACAL fosters a culture of innovation, learning, engagement, and personal growth for SACS students, faculty and staff as they employ advanced computing capabilities to understand and solve complex problems.
- Foster research partnerships and initiatives that result in nationally and internationally recognized distinctive and innovative sponsored research programs.

Through ACAL, the SACS houses an open forum, which is an open access gathering and workspace, where technology thought leaders of our time (faculty, researchers, students, and visitors of all kinds) converge to wrestle with the world's most challenging and technological problems. The open forum is the center of the SACS, where, on any given day or time, small and often large groups of faculty, students, and industry experts are found collaborating, coding, challenging, arguing, diagramming, and developing solutions to the world's most difficult technology problems. It is a safe place for all to express ideas, contribute technological works such as code, designs, specifications, and other creative contributions.

SACS Academic Programming

Program Offerings

The SACS offers the following academic programs:

1. Doctor of Philosophy (Ph.D.) in Biomedical Data Science
2. Doctor of Philosophy (Ph.D.) in Data Science
3. Master of Science (MS) Degree in Artificial Intelligence
4. Master of Science (MS) Degree in Artificial Intelligence and Entrepreneurship
5. Master of Science (MS) Degree in Bioinformatics
6. Master of Science (MS) Degree in Biomedical Data Science
7. Master of Science (MS) Degree in Computer Science
8. Master of Science (MS) Degree in Cybersecurity Assurance
9. Master of Science (MS) Degree in Data Science
10. Graduate Certificate in Biomedical Data Science
11. Graduate Certificate in Data Science
12. Graduate Certificate in AI and Data Analytics for Health Systems
13. Graduate Certificate in Bioinformatics & Genomics Data Foundations
14. Graduate Certificate in Cybersecurity for Health & Medical Data

Programmatic Goals (Objectives)

The SACS expects that its graduates will possess:

1. Critical Thinking Skills such as creative thinking, innovation, inquiry and analysis, evaluation and synthesis of information;
2. Empirical and Quantitative Skills that include the manipulation and analysis of data or observable facts resulting in informed conclusions;
3. Personal Responsibility Skills such as the ability to connect choices, actions and consequences to ethical decision-making;
4. Communication Skills which include effective development, interpretation and expression of ideas through written, oral, and visual communication;
5. Teamwork Skills includes the ability to consider different points of view and to lead and work effectively with others to support a shared or goal;
6. Social Responsibility Skills to include intercultural competence, knowledge of civic responsibility, and the ability to serve and engage effectively in regional, national, and global communities.

Achievement of these program objectives will enable the SACS academic programs to produce graduates who are successful professionals and good citizens. That is, the programs will provide a quality education based on expert knowledge that enables its graduates to be successful problem solvers in a data-driven global society.

Doctor of Philosophy (Ph.D.)

Ph.D. Biomedical Data Science

The Doctor of Philosophy in Biomedical Data Science degree program is designed to prepare students for careers as independent researchers, educators, and leaders in academia, healthcare, industry, and government. The program equips students (and professionals) with best-practice knowledge and current methodologies to make their businesses more agile as they acquire skills to capture, aggregate and analyze disparate types of biomedical data, recognize patterns and trends within that data, and communicate results, and translating data-driven discoveries into solutions that advance biomedical research, precision medicine, and population health.

The curriculum encompasses all important aspects of biomedical data science, including *Bioinformatics*, *Computational structural biology*, *epidemiology*, *Mathematical and statistical theory*, *Biostatistics*, *AI and Computational ML*, *Predictive modeling and analytics*, *Advanced scientific computing*, *Visualization and unstructured data analysis*, and *Ethics and Privacy in Healthcare*. Through rigorous coursework and original dissertation research, students will gain the analytical, computational, and research skills necessary to address complex biomedical and public health challenges and contribute to evidence-based decision making.

Course Requirements

Completion of the program requires **75 graduate credits**. To provide a common background in biomedical data science, twelve core courses are required for all students. In addition to the core courses, students will take at least 6 hours of electives, at least 6 hours of research seminar and 12 hours of dissertation and defense.

12 credit hours of foundational leveling courses:

- MSBD 501 Introduction to Bioinformatics
- MSBD 502 Computational Structural Biology
- MSBD 503 Introduction to Epidemiology
- MSBD 710 Mathematical and Statistical Theory

36 credit hours (12 core courses) including the Candidacy Exam:

1. MSBD 540 Intro to Artificial Intelligence for Health Care
2. MSBD 550 Applied Machine Learning
3. MSBD 555 Big Data Management and Analytics
4. MSBD 566 Predictive Modeling and Analytics
5. MSBD 570 Visualization and Unstructured Data Analytics
6. MSBD 720 Advanced Biostatistics
7. MSBD 725 Advanced Scientific Computing: Stochastic Methods for Data Analysis, Inference and Optimization
8. MSBD 726 Biomedical Imaging, Processing and Analysis
9. MSBD 735 Advanced Epidemiology for Public Health
10. MSBD 736 Ethical, Legal and Societal Issues in Healthcare
11. MSBD 740 Privacy and Security in Healthcare
12. MSBD 800 Candidacy Exam

9 elective hours from the following courses:

- MSBD 610 Network and graph theory for Biomedical data analytics

- MSBD 620 Biomedical Signal Processing
 - MSBD 730 Advanced Deep Learning
 - MSBD 755 Special Topics
 - MSDS 560 Natural Language Processing
- Or courses recommended and approved by the academic/research advisor

6 credit hours of research seminar from the following courses:

- MSBD 750 Directed Reading and Research
- MSBD 870 Literature Review
- MSBD 880 Proposal Manuscript and Defense

12 credit hours of Dissertation and Defense:

- MSBD 890 Dissertation and Defense

Learning Outcomes for the Ph.D in Biomedical Data Science Program

By the time of graduation, Ph.D. students will be expected to have:

- a. an ability to conduct original, independent research that advances knowledge in biomedical data science and contributes to scientific literature.
- b. an understanding of professional, ethical, legal, and social issues and responsibilities of interest to the complex field of healthcare and biomedical data science.
- c. an ability to apply advanced knowledge of biomedical data science, statistics, mathematics, artificial intelligence, machine learning, and computational methods to address complex biomedical and public health challenges.
- d. an ability to design, develop, implement, and evaluate computational models, algorithms, and analytical approaches for large-scale, healthcare or biomedical data.
- e. an ability to effectively communicate complex scientific concepts, research methods, and findings through scholarly publications, presentations, and professional interactions with both technical and interdisciplinary audiences.
- f. an ability to develop and defend an original dissertation that demonstrates scholarly contribution, independent thinking, methodological rigor, and expertise in biomedical data science.

Student learning outcomes are assessed through a comprehensive evaluation process that includes academic performance, research achievement, milestone examinations, scholarly productivity, and professional development activities. Foundational and advanced competencies in biomedical data science are evaluated through required coursework. Research competencies are assessed through a series of program milestones designed to evaluate students' progression toward independent scholarship. These assessments include successful completion of the Ph.D. candidacy examination (MSBD 800), dissertation proposal defense (MSBD 880), evaluations by the research advisor and dissertation committee, and the final dissertation defense (MSBD 890).

- *Ability to function effectively on teams and as a team leader to accomplish a common goal.* Assessment indicator: Assignment from **MSBD 550 Computational Machine Learning**.
- *An understanding of professional, ethical, legal, and social issues and responsibilities of interest to the complex field of biomedical data science.* Assessment indicator: Assignment from **MSBD 736 Ethical, Legal & Societal Issues in Healthcare** and **MSBD 740 Big Data Privacy and Security**

- *Ability to apply advanced knowledge of data science and mathematical statistics appropriate to the discipline.* Assessment indicator: Assignment from **MSBD 502 Computational Structural Biology** and **MSBD 710 Mathematical and Statistical Theory**
- *Ability to conduct an advanced data science research and design phase of a real-world project, employing data science methods, techniques, and practices.* Assessment indicator: Assignment from **MSBD 720 Advanced Biostatistics**, and **MSBD 735 Advanced Epidemiology**.
- *Ability to provide new solutions to complex issues in data science through the design and implementation of advanced modeling techniques, such as predictive analytics and data mining or stochastic methods from artificial intelligence.* Assessment indicator: Assignment from **MSBD 566 Predictive Modeling & Analytics**.
- *Ability to implement and present a comprehensive real-life, industry-type or academic style data science research problem and solution.* Assessment indicator: **MSBD 890 Dissertation and Defense**.

Ph.D. Data Science

The Data Science Ph.D. program is designed for students with undergraduate or graduate backgrounds in data science, computer science, mathematics, statistics, engineering, information technology, or related areas who wish to contribute to data and computational sciences. The curriculum combines mathematics and statistics, AI and machine learning, advanced data analytics and database design, as well as related topics in research and discovery.

The SACS Data Science Ph.D. will equip you to address challenging big data issues through advanced techniques like artificial intelligence, machine learning, deep learning, advanced data analytics and database design. But you will also receive a much more enriching education.

You will learn advanced code and analytical models, but also to communicate your findings to influence strategic decisions. We will challenge you to develop projects to solve real-world problems, and to avoid potential algorithmic bias and ethical use issues. As a graduate, you will be ready to collaborate across diverse teams and also lead them to innovative data solutions.

Course Requirements

Completion of the program requires 75 **graduate credits**. This includes:

- **15 hours** of foundational coursework drawn from computer science and mathematics.
 - MSDS 510 Computer Programming Foundations for Data Science
 - MSDS 520 Mathematical and Statistical Foundations for Data Science
 - MSDS 525 Data Management Foundations for Data Science
 - MSDS 535 Further Mainstream Programming Languages for Data Science
 - MSDS 710 Mathematical and Statistical Theory
- **36 hours** of “core” courses drawn from data science, computer science and advanced statistics.
 - MSDS 550 Computational Machine Learning
 - MSDS 555 Big Data Management and Analytics
 - MSDS 565 Predictive Modeling and Analytics
 - MSDS 570 Visual Analytics
 - MSDS 580 Research Methods
 - MSDS 700 Fundamentals of Database Management Systems
 - MSDS 715 Data Modeling for Big Data

- MSDS 720 Advanced Statistics
- MSDS 725 Adv Scientific Computing: Stochastic Methods for Data Analysis, Inference & Optimization
- MSDS 730 Deep Learning
- MSDS 736 Ethical, Legal & Societal Issues in Healthcare
- MSDS 740 Big Data Privacy and Security
- **1 hour** of Candidacy Exam (or qualifying) study and preparation in the following 6 courses:
 - MSDS 550 Computational Machine Learning
 - MSDS 565 Predictive Modeling and Analytics
 - MSDS 700 Fundamentals of Database Management Systems
 - MSDS 710 Mathematical and Statistical Theory
 - MSDS 715 Data Modeling for Big Data
 - MSDS 720 Advanced Statistics. The candidacy exam is normally taken at the end of the second year.
- **5 hours** of research seminar (at least 1 hour in each)
 - MSDS 750V Individual Studies
 - MSDS 870V Literature Review
 - MSDS 880V Seminar
- **6 hours** of special topics and electives.
 - MSDS 560 Natural Language Processing
 - MSDS 610 Network and Graph Theory for Data Science
 - MSDS 620 Signal Processing for Big Data
 - MSDS 655 AI in Cyber Security
 - MSDS 727 Digital Image Processing and Understanding
 - Or courses recommended by the Academic Advisor
- **12 hours** devoted to dissertation and defense.
 - MSBD 890 Dissertation and Defense

Learning Outcomes for the Ph.D. Program

By the time of graduation, Ph.D. students will be expected to have:

- g. an ability to function effectively on teams and as a team leader to accomplish a common goal.
- h. an understanding of professional, ethical, legal, and social issues and responsibilities of interest to the complex field of data science.
- i. an ability to apply advanced knowledge of data science and mathematical statistics appropriate to the discipline.
- j. an ability to conduct an advanced data science research and design phase of a real-world project, employing data science methods, techniques, and practices.
- k. an ability to provide new solutions to complex Big data issues in data science through the design and implementation of advanced modeling techniques, such as predictive analytics and data mining or stochastic methods from artificial intelligence.
- l. an ability to implement and present a comprehensive real-life, industry-type or academic style data science research problem and solution.

How Ph.D. student learning outcomes for the program will be assessed:

- a. *Ability to function effectively on teams and as a team leader to accomplish a common goal.*
Assessment indicator: Assignment from **MSDS 535 Further Mainstream Programming Languages for Data Science**

- b. *An understanding of professional, ethical, legal, and social issues and responsibilities of interest to the complex field of biomedical data science.* Assessment indicator: Assignment from **MSDS 736 Ethical, Legal & Societal Issues in Healthcare** and **MSDS 740 Big Data Privacy and Security**
- c. *Ability to apply advanced knowledge of data science and mathematical statistics appropriate to the discipline.* Assessment indicator: Assignment from **MSDS 710 Mathematical and Statistical Theory**.
- d. *Ability to conduct an advanced data science research and design phase of a real-world project, employing data science methods, techniques, and practices.* Assessment indicator: Assignment from **MSDS 730 Deep Learning**.
- e. *Ability to provide new solutions to complex issues in data science through the design and implementation of advanced modeling techniques, such as predictive analytics and data mining or stochastic methods from artificial intelligence.* Assessment indicator: Assignment from **MSDS 550 Computational Machine Learning** and **MSDS 565 Predictive Modeling & Analytics**.
- f. *Ability to implement and present a comprehensive real-life, industry-type or academic style data science research problem and solution.* Assessment indicator: **MSBD 890V Dissertation and Defense**.

Master of Science Programs

Master of Science in Biomedical Data Science (MSBD)

The Master of Science in Biomedical Data Science (MSBD) degree program is designed to equip students (and professionals) with best-practice knowledge and current methodologies to make their businesses more agile as they acquire skills to capture, aggregate and analyze disparate types of biomedical data, recognize patterns and trends within that data, and communicate results. The curriculum encompasses all important aspects of biomedical data science, including: Computational software engineering, Precision medicine informatics, Biostatistics, AI and Computational ML, Predictive modeling and analytics, Data conscientiousness, GIS algorithms for healthcare analytics, Population health informatics, Visualization and unstructured data analysis, and Ethics of biomedical data science.

Completion of the program requires **42 graduate credits (14 courses)**. To provide a common background in biomedical data science, ten core courses are required of all students. In addition to the core courses, students will choose a concentration track within the program by taking three courses in an emphasis area. (Schedule permitting and with the approval of the program director, students may also choose their three emphasis courses from any of the concentration track areas.) The degree culminates with a comprehensive, real-life industry-type capstone, oriented toward the student's domain of interest.

The coursework includes the following **12 core courses (36 credit hours)** including the Capstone:

- | | |
|-------------|---|
| 1. MSBD 510 | Computer Programming Foundations for Biomedical Data Science (3 credit hours) |
| 2. MSBD 515 | Biomedical Data Conscientiousness (3 credit hours) |
| 3. MSBD 520 | Introduction to Biostatistics (3 credit hours) |
| 4. MSBD 525 | Data Management Foundations for Biomedical Data Science (3 credit hours) |
| 5. MSBD 530 | Statistical Methods for Biomedical Data Science (3 credit hours) |
| 6. MSBD 540 | Introduction to Artificial Intelligence in Healthcare (3 credit hours) |
| 7. MSBD 550 | Applied Machine Learning for Biomedical Data Science (3 credit hours) |
| 8. MSBD 566 | Predictive Modeling and Analytics (3 credit hours) |

- 9. MSBD 570 Visualization and Unstructured Data Analysis (3 credit hours)
- 10. MSBD 575 Ethics in Biomedical Data Science (3 credit hours)
- 11. MSBD 580 Research Methods (3 credit hours)
- 12. MSBD 590 Capstone (3 credit hours)

Students choose one of two **Concentration Tracks**, each comprising **3 Courses (6 credit hours)**:

Precision Medicine Informatics Concentration Track:

- MSBD 535 Precision Medicine Informatics (3 credit hours)
- MSDS 545 Introduction to Computational Software Engineering (3 credit hours)

Population Health Informatics Concentration Track:

- MSBD 536 Population Health Informatics (3 credit hours)
- MSBD 545 GIS for Health Informatics (3 credit hours)

Student Outcomes for the MSBD Program

By the time of graduation, MSBD students will be expected to have ability to:

- Analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.
- Design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.
- Communicate effectively in a variety of professional contexts.
- Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- Function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.
- Apply knowledge of biomedical data science and mathematical statistics appropriate to the discipline.

How the MSBD Student Outcomes will be assessed

- a. Ability to analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.

Assessment indicators:

- Assignment from **MSBD 550 Applied Machine Learning for Biomedical Data Science**
- Project from **MSBD 580 Research Methods**
- Capstone Project from **MSBD 590 Capstone**

- b. Ability to design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.

Assessment indicators:

- Assignment from **MSBD 550 Applied Machine Learning for Biomedical Data Science**
- Project from **MSBD 580 Research Methods**
- Capstone Project from **MSBD 590 Capstone**

- c. Ability to communicate effectively in a variety of professional contexts.

Assessment indicators:

- Assignment from **MSBD 570 Visualization and Unstructured Data Analysis**
- Assignment from **MSBD 580 Research Methods**
- Capstone Project from **MSBD 590 Capstone**

d. Ability to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

Assessment indicators:

- Assignment from **MSBD 575 Ethics in Data Science**
- Project from **MSBD 580 Research Methods**
- Capstone Project from **MSBD 590 Capstone**

e. Ability to function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.

Assessment indicators:

- Project from **MSBD 540 Introduction to Artificial Intelligence in Healthcare**
- Project from **MSBD 550 Applied Machine Learning for Biomedical Data Science**
- Project from **MSBD 575 Ethics in Data Science**

f. Ability to apply knowledge of biomedical data science and mathematical statistics appropriate to the discipline. Assessment indicators:

- Project from **MSBD 540 Introduction to Artificial Intelligence in Healthcare**
- Project from **MSBD 550 Applied Machine Learning for Biomedical Data Science**
- Project from **MSBD 580 Research Methods**

Master of Science in Bioinformatics (MSBI)

The Master of Science in Bioinformatics (MSBI) degree program prepares students with the computational, statistical, and biological expertise needed to analyze complex biological data and solve real-world problems in healthcare and biomedical research. The curriculum integrates foundational data science, biostatistics, molecular biology, and advanced bioinformatics topics such as computational genomics, structural biology, and biomedical modeling. Students will gain hands-on experience with bioinformatics tools and pipelines while developing the ability to interpret results in biological and clinical contexts. Graduates will be prepared for careers in biotechnology, academia, pharmaceutical research, and clinical informatics.

Completion of the program requires **42 graduate credits (14 courses)**. Students complete all the required courses and participate in a capstone experience aligned with research or applied bioinformatics projects. The 14 courses are:

1. MSBD 510 Computer Programming Foundations for Biomedical Data Science (3 credit hours)
2. MSBD 501 Introduction to Bioinformatics (3 credit hours)
3. MSBD 502 Computational Structural Biology (3 credit hours)
4. MSBD 520 Introduction to Biostatistics (3 credit hours)
5. MSBD 525 Data Management Foundations for Data Science (3 credit hours)
6. MSBI 530 Mathematical Modeling for Bioinformatics (3 credit hours)
7. MSBD 550 Applied Machine Learning for Biomedical Data Science (3 credit hours)
8. MSBI 555 Computational Genomics (3 credit hours)
9. MSBI 565 Computational Biomedicine and Drug Discovery (3 credit hours)
10. MSBD 570 Visualization and Unstructured Data Analysis (3 credit hours)
11. MSBD 575 Ethics in Biomedical Data Science (3 credit hours)
12. MSBD 580 Research Methods (3 credit hours)
13. MSBI 585 Special Topics in Bioinformatics and Computational Biology (3 credit hours)
14. MSBD 590 Capstone (3 credit hours)

Student Outcomes for the MSBI Program

By the time of graduation, MSBI students will be expected to have ability to:

- a. Analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.
- b. Design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.
- c. communicate effectively in a variety of professional contexts.
- d. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- e. function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.
- f. Apply knowledge of bioinformatics and mathematical statistics appropriate to the discipline.

How the MSBI Student Outcomes will be assessed

- a. Ability to analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.
Assessment indicators:
 - Assignment from **MSBI 555 Computational Genomics**
 - Project from **MSBD 580 Research Methods**
 - **Capstone Project from MSBD 590 Capstone**
- b. Ability to design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.
Assessment indicators:
 - Assignment from **MSBI 565 Computational Biomedicine and Drug Discovery**
 - Capstone Project from **MSBD 590 Capstone**
 - Project from **MSBI 585 Special Topics in Bioinformatics and Computational Biology**
- c. Ability to communicate effectively in a variety of professional contexts.
Assessment indicators:
 - Assignment from **MSBD 570 Visualization and Unstructured Data Analysis**
 - Assignment from **MSBD 580 Research Methods**
 - Capstone Project from **MSBD 590 Capstone**
- d. Ability to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
Assessment indicators:
 - Assignment from **MSBD 575 Ethics in Biomedical Data Science**
 - Project from **MSBD 580 Research Methods**
 - Capstone Project from **MSBD 590 Capstone**
- e. Ability to function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.
Assessment indicators:
 - Assignment from **MSBD 575 Ethics in Biomedical Data Science**
 - Project from **MSBD 580 Research Methods**
- f. Ability to apply knowledge of bioinformatics and mathematical statistics appropriate to the discipline. Assessment indicators:
 - Project from **MSBI 565 Computational Biomedicine and Drug Discovery**

- Group assignment from **MSBI 585 Special Topics in Bioinformatics and Computational Biology**
- Capstone Project from **MSBD 590 Capstone**

Master of Science in Data Science (MSDS)

The Master of Science in Data Science (MSDS) degree program is designed to equip students (and professionals) with best-practice knowledge and current methodologies to make their businesses more agile as they acquire skills to capture, aggregate and analyze disparate types of data, recognize patterns and trends within that data, and communicate results. The curriculum encompasses all important aspects of data science, including: *Mainstream computer programming for data science, Statistical inference and decision modeling, Big data management and analytics, AI and Computational ML, Predictive modeling and analytics, Data conscientiousness, NLP and Text Analytics, Visualization and unstructured data analysis, and Ethics of data science.*

Completion of the program requires **42 graduate credits (14 courses)**. To provide a common background in data science, thirteen core courses are required of all students. The degree culminates with a comprehensive real-life industry-type capstone, oriented toward the student's domain of interest. The 14 courses are:

The coursework includes the following **14 core courses (42 credit hours)** including the Capstone:

- | | |
|--------------|--|
| 1. MSDS 510 | Computer Programming Foundations for Data Science (3 credit hours) |
| 2. MSDS 515 | Data Conscientiousness (3 credit hours) |
| 3. MSDS 520 | Mathematical and Statistical Foundations for Data Science (3 credit hours) |
| 4. MSDS 525 | Data Management Foundations for Data Science (3 credit hours) |
| 5. MSDS 530 | Statistical Inference and Modeling (3 credit hours) |
| 6. MSDS 535 | Further Mainstream Programming Languages for Data Science (3 credit hours) |
| 7. MSDS 550 | Computational Machine Learning (3 credit hours) |
| 8. MSDS 555 | Big Data Management and Analytics (3 credit hours) |
| 9. MSDS 560 | Natural Language Processing (3 credit hours) |
| 10. MSDS 565 | Predictive Modeling and Analytics (3 credit hours) |
| 11. MSDS 570 | Visualization and Unstructured Data Analysis (3 credit hours) |
| 12. MSDS 575 | Ethics in Data Science (3 credit hours) |
| 13. MSDS 580 | Research Methods (3 credit hours) |
| 14. MSDS 590 | Capstone (3 credit hours) |

Student Outcomes for the MSDS Program

By the time of graduation, MSDS students will be expected to have ability to:

- analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*
- design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.*
- communicate effectively in a variety of professional contexts.*
- recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.*
- function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.*
- apply knowledge of data science and mathematical statistics appropriate to the discipline.*

How the MSDS Student Outcomes will be assessed

- Ability to analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*

Assessment indicators:

- Assignment from **MSDS 550 Computational Machine Learning**

- Project from **MSDS 580 Research Methods**
- Capstone Project from **MSDS 590 Capstone**
- b. Ability to design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.
Assessment indicators:
 - Assignment from **MSDS 550 Computational Machine Learning**
 - Project from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**
- c. Ability to communicate effectively in a variety of professional contexts.
Assessment indicators:
 - Assignment from **MSDS 570 Visualization and Unstructured Data Analysis**
 - Assignment from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**
- d. Ability to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
Assessment indicators:
 - Assignment from **MSDS 575 Ethics in Data Science**
 - Project from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**
- e. Ability to function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.
Assessment indicators:
 - Project from **MSBD 555 Big Data Management and Analytics**
 - Project from **MSDS 565 Predictive Modeling and Analytics**
 - Project from **MSDS 575 Ethics in Data Science**
- f. Ability to apply knowledge of data science and mathematical statistics appropriate to the discipline.
Assessment indicators:
 - Project from **MSBD 555 Big Data Management and Analytics**
 - Project from **MSDS 565 Predictive Modeling and Analytics**
 - Project from **MSDS 580 Research Methods**

Master of Science in Artificial Intelligence (MSAI)

The Master of Science in Artificial Intelligence (MSAI) degree program is designed to equip students with advanced knowledge and skills in AI techniques, including machine learning, deep learning, natural language processing, and computer vision. This program aims to foster critical thinking and problem-solving abilities by combining theoretical foundations with practical applications. Graduates will be prepared to innovate and develop AI-driven solutions across industries such as healthcare systems, medical research, and financial systems. Additionally, the program seeks to nurture ethical leadership, ensuring that AI technologies are developed and applied responsibly to address real-world challenges while advancing the state of the art in the field.

Completion of the program requires **42 graduate credits (14 courses)**. To provide a common background in AI and Machine Learning, thirteen core courses are required of all students. The degree culminates with a comprehensive real-life industry-type capstone, oriented toward the student's domain of interest. The 14 courses are:

1. MSDS510 Computer Prog Foundations for Data Science (3 credit hours)
2. MSDS515 Data Conscientiousness (3 credit hours)
3. MSDS 535 Further Mainstream Programming Languages for Data Science (3 credit hours)
4. MSDS570 Visualization and Unstructured Data Analysis (3 credit hours)
5. MSCS575 High Performance Computing (3 credit hours)

6. MSDS 520 Math and Stat Foundations for Data Science (3 credit hours)
7. MSDS 530 Statistical Inference and Modeling (3 credit hours)
8. MSDS 725 Advanced Scientific Computing: Stochastic Methods for Data Analysis, Inference & Optimization
9. MSCS 540 Theoretical Foundations of Artificial Intelligence (3 credit hours)
10. MSDS 550 Computational Machine Learning (3 credit hours)
11. MSDS 560 Natural Language Processing (3 credit hours)
12. MSDS 565 Predictive Modeling and Analytics (3 credit hours)
13. MSDS 730 Deep Learning (3 credit hours)
14. MSDS590 Capstone (3 credit hours)

Student Outcomes for the MSAI Program

By the time of graduation, MSAI students will be expected to have ability to:

- a. *analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*
- b. *design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.*
- c. *communicate effectively in a variety of professional contexts.*
- d. *recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.*
- e. *function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.*
- f. *apply knowledge of artificial intelligence and mathematical statistics appropriate to the discipline.*

How the MSAI Student Outcomes will be assessed

How the MSAI Student Outcomes will be assessed

- a. *Ability to analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*
Assessment indicators:
 - Assignment from **MSDS 550 Computational Machine Learning**
 - Project from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**
- b. *Ability to design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.*
Assessment indicators:
 - Assignment from **MSDS 550 Computational Machine Learning**
 - Project from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**
- c. *Ability to communicate effectively in a variety of professional contexts.*
Assessment indicators:
 - Assignment from **MSDS 570 Visualization and Unstructured Data Analysis**
 - Assignment from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**

- d. *Ability to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.*
Assessment indicators:
- *Assignment from **MSDS 575 Ethics in Data Science***
 - *Project from **MSDS 580 Research Methods***
 - *Capstone Project from **MSDS 590 Capstone***
- e. *Ability to function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.*
Assessment indicators:
- *Project from **MSDS 515 Data Conscientiousness***
 - *Project from **MSDS 565 Predictive Modeling and Analytics***
 - *Project from **MSDS 575 Ethics in Data Science***
- f. *Ability to apply knowledge of artificial intelligence and mathematical statistics appropriate to the discipline.* *Assessment indicators:*
- *Project from **MSDS 515 Data Conscientiousness***
 - *Project from **MSDS 565 Predictive Modeling and Analytics***
 - *Project from **MSDS 580 Research Methods***

Master of Science in Artificial Intelligence & Entrepreneurship (MSAE)

The Master of Science in Artificial Intelligence and Entrepreneurship (MSAIE) degree program is designed to equip students with the technical competencies in AI and the entrepreneurial skills required to launch and scale AI-driven ventures. The foundations of entrepreneurship are evolving using AI, redefining how startups acquire customers, build products, and scale operations. The use of AI is leveraged across various sectors, including healthcare, to meet marketing demands and automated decision-making strategies. AI is a driving factor in healthcare innovation, transforming everything from patient acquisition and engagement to clinical decision making, drug discovery, and hospital operations. There is an increase in the Rate of Interest by integrating AI into acquisition campaigns, bringing financial value to AI when strategically deployed in entrepreneurial ventures. Similarly, a strong background in AI capabilities provide opportunities to develop more innovative products, particularly when combined with Lean Startup Methodology (LSM). To adapt and align with marketing trends, many entrepreneurs need the necessary skills to build the business cases for AI adoption and to integrate it effectively with lean teams, while managing the uncertainties that are essential in new technologies. A specialized graduate program that combines entrepreneurship principles with applied AI skills addresses this need.

The M.S. AI and Entrepreneurship program is organized around five integrated pillars:

- AI Foundations: Machine learning, NLP, deep learning and visualization.
- Agent AI Tools: Applied tools and frameworks used for agentic workflows.
- Entrepreneurship: Lean startup, business models and venture pitching.
- Product Development: MVP design, agile prototyping and software engineering.
- Innovation Ethics: Responsible AI and the legal and regulatory landscape.
- Capstone (Startup Studio): Building and launching an AI venture.

Completion of the program requires **42 graduate credits (13 courses)**:

1. MSDS510 Computer Prog Foundations for Data Science (3 credit hours)
2. MSDS520 Math and Stat Foundations for Data Science (3 credit hours)
3. MSDS530 Statistical Inference and Modeling (3 credit hours)

4. MSDS535 Further Mainstream Programming Languages for Data Science (3 credit hours)
5. MSDS545 Software Engineering
6. MSDS550 Computational Machine Learning (3 credit hours)
7. MSDS560 Natural Language Processing (3 credit hours)
8. MSDS575 Ethics in Data Science
9. MSDS730 Deep Learning (3 credit hours)
10. MSAE510 Lean Startup & Business Models for AI
11. MSAE520 AI Product Management & Innovation
12. MSAE530 Agentic AI and Multi-Agent Systems
13. MSAE590 Capstone (6 credit hours)

Student Outcomes for the MSAE Program

By the time of graduation, MSAE students will be expected to have ability to:

- a. Build intelligent systems using modern AI frameworks and Agent AI tools.
- b. Navigate ethical, legal, and regulatory challenges in AI innovation.
- c. Translate real-world problems into viable AI startup ideas.
- d. Launch MVPs using rapid prototyping and user feedback.
- e. Develop business models, pitch decks, and funding strategies.

How the MSAE Student Outcomes will be assessed

- a. Build intelligent systems using modern AI frameworks and Agent AI tools.
Assessment indicators:
 - Assignment from MSDS 550 Computational Machine Learning
 - Project from MSDS 545 Software Engineering
 - Term project from MSAE 530 Agentic AI and Multi-Agent Systems
 - Capstone Project from MSAE 590 Capstone
- b. Navigate ethical, legal, and regulatory challenges in AI innovation.
Assessment indicators:
 - Assignment from MSDS 575 Ethics in Data Science
 - Project from MSAE 520 AI Product Management & Innovation
 - Capstone Project from MSAE 590 Capstone
- c. Translate real-world problems into viable AI startup ideas.
Assessment indicators:
 - Project from MSAE 510 Lean Startup & Business Models for AI
 - Venture Pitch Presentation from MSAE 510 Lean Startup & Business Models for AI
 - Capstone Project from MSAE 590 Capstone
- d. Launch MVPs using rapid prototyping and user feedback.
Assessment indicators:
 - Project from MSAE 520 AI Product Management & Innovation
 - Project from MSDS 545 Software Engineering
 - Capstone Project from MSAE 590 Capstone
- e. Develop business models, pitch decks, and funding strategies.
Assessment indicators:
 - Assignment from MSAE 530 Agentic AI and Multi-Agent Systems
 - Project from MSDS 560 Natural Language Processing

- Capstone Project from MSAE 590 Capstone
- Term project from MSAE510 Lean Startup & Business Models for AI

Master of Science in Computer Science (MSCS)

The Master of Science in Computer Science (MSCS) degree program is designed with a curriculum rich in advanced computer science courses, programming language semantics along with Artificial Intelligence and ethics in mind. Students will have course options in the areas of software development, advanced algorithm design, principles of programming language, AI, cybersecurity, natural language processing, and High-performance computing. The major objectives of MSCS program is to develop an in-depth expertise for a successful career in the fields of computer science and related fields, the ability to meet the challenges of the future through continual professional growth and an exhibition of concern for social and impact of computer-related decisions and applications.

Completion of the program requires **42 graduate credits (14 courses) including the capstone**. The major courses are listed below:

1. MSDS575: Ethics in Data Science (3 credit hours)
2. MSCS540: Theoretical Foundations of Artificial Intelligence (3 credit hours)
3. MSDS520: Mathematical and Statistical Foundations for Data Science (3 credit hours)
4. MSCS565: Advanced Computer Systems (3 credit hours)
5. MSCS580: Advanced Analysis of Algorithms (3 credit hours)
6. MSDS535: Further Mainstream Programming Languages for Data Science (3 credit hours)
7. MSDS550: Computational Machine Learning (3 credit hours)
8. MSCS575: High Performance Computing (3 credit hours)
9. MSDS560: Natural Language Processing (3 credit hours)
10. MSDS700: Fundamentals of Database Management Systems (3 credit hours)
11. MSDS655: AI in Cybersecurity (3 credit hours)
12. MSCS530: Principles of Programming Languages (3 credit hours)
13. MSDS545: Computational Software Engineering (3 credit hours)
14. MSDS590: Capstone (3 credit hours)

Student Outcomes for the MSCS Program

By the time of graduation, MSCS students will be expected to have ability to:

- a. *analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*
- b. *design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.*
- c. *communicate effectively in a variety of professional contexts.*
- d. *recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.*
- e. *function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.*
- f. *apply knowledge of computer science and mathematical statistics appropriate to the discipline.*

How the MSCS Student Outcomes will be assessed

- a. *Ability to analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*

Assessment indicators:

- Assignment from **MSDS 550 Computational Machine Learning**

- *Project from **MSDS 580 Research Methods***
- *Capstone Project from **MSDS 590 Capstone***
- b. *Ability to design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.*
Assessment indicators:
 - *Assignment from **MSDS 550 Computational Machine Learning***
 - *Project from **MSDS 580 Research Methods***
 - *Capstone Project from **MSDS 590 Capstone***
- c. *Ability to communicate effectively in a variety of professional contexts.*
Assessment indicators:
 - *Assignment from **MSDS 570 Visualization and Unstructured Data Analysis***
 - *Assignment from **MSDS 580 Research Methods***
 - *Capstone Project from **MSDS 590 Capstone***
- d. *Ability to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.*
Assessment indicators:
 - *Assignment from **MSDS 575 Ethics in Data Science***
 - *Project from **MSDS 580 Research Methods***
 - *Capstone Project from **MSDS 590 Capstone***
- e. *Ability to function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.*
Assessment indicators:
 - *Project from **MSDS545: Computational Software Engineering***
 - *Project from **MSDS 565 Predictive Modeling and Analytics***
 - *Project from **MSDS 575 Ethics in Data Science***
- f. *Ability to apply knowledge of computer science and mathematical statistics appropriate to the discipline. Assessment indicators:*
 - *Project from **MSDS545: Computational Software Engineering***
 - *Project from **MSDS 565 Predictive Modeling and Analytics***
 - *Project from **MSDS 580 Research Methods***
- g. *Ability to apply knowledge of computer science and mathematical statistics appropriate to the discipline. Assessment indicators:*
 - *Project from **MSDS545: Computational Software Engineering***
 - *Project from **MSDS 565 Predictive Modeling and Analytics***
 - *Project from **MSDS 580 Research Methods***

Master of Science in Cybersecurity Assurance (MSCA)

The Master of Science in Cybersecurity Assurance (MSCA) program prepares students to become leaders in safeguarding digital infrastructures and ensuring data integrity across critical systems. Combining foundational training in data science and cybersecurity with advanced topics such as ethical hacking, distributed systems, and AI-driven threat detection, this interdisciplinary program is built to meet the growing demand for cybersecurity professionals in sectors like healthcare, finance, education, government, and beyond. The MSCA program also emphasizes responsible data use, ethical frameworks, and the protection of sensitive information through modern security protocols and data-conscious practices. Aligned with National Centers of Academic Excellence in Cyber Defense (NCAE-CD) standards, the MSCA prepares graduates to identify,

analyze, and neutralize cyber threats in real time using cutting-edge tools and technologies.

Completion of the program requires **42 graduate credits (14 courses)**. The program includes a blend of foundational, technical, and applied courses, culminating in a comprehensive capstone project focused on real-world cybersecurity challenges. The 14 courses are:

1. MSDS 510 Computer Programming Foundations for Data Science (3 credit hours)
2. MSDS 515 Data Conscientiousness (3 credit hours)
3. MSDS 520 Mathematical and Statistical Foundations for Data Science (3 credit hours)
4. MSCA 525 Introduction to Cybersecurity (3 credit hours)
5. MSDS 545 Introduction to Computational Software Engineering (3 credit hours)
6. MSCA 550 Digital Forensics and Ethical Hacking (3 credit hours)
7. MSCA 560 Distributed Systems & Network Security (3 credit hours)
8. MSCS 565 Advanced Computer Systems (3 credit hours)
9. MSDS 655 AI in Cybersecurity (3 credit hours)
10. MSCS 575 High Performance Computing (3 credit hours)
11. MSDS 575 Ethics in Data Science (3 credit hours)
12. MSDS 700 Fundamentals of Database Management Systems (3 credit hours)
13. MSDS 740 Big Data Privacy and Security (3 credit hours)
14. MSDS 590 Capstone (3 credit hours)

Student Outcomes for the MSCA Program

By the time of graduation, MSCA students will be expected to have ability to:

- a. *analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*
- b. *design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.*
- c. *communicate effectively in a variety of professional contexts.*
- d. *recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.*
- e. *function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.*
- f. *apply knowledge of cybersecurity and mathematical statistics appropriate to the discipline.*

How the MSCA Student Outcomes will be assessed

- h. *Ability to analyze a complex problem and apply principles of computing and other relevant disciplines to elaborate solutions to it.*

Assessment indicators:

- Assignment from **MSDS 550 Computational Machine Learning**
- Project from **MSDS 580 Research Methods**
- Capstone Project from **MSDS 590 Capstone**

- i. *Ability to design, implement, and evaluate a computing-based solution to meet a given set of requirements in the context of the program's discipline.*

Assessment indicators:

- Assignment from **MSDS 550 Computational Machine Learning**
- Project from **MSDS 580 Research Methods**
- Capstone Project from **MSDS 590 Capstone**

- j. *Ability to communicate effectively in a variety of professional contexts.*

Assessment indicators:

- Assignment from **MSDS 570 Visualization and Unstructured Data Analysis**
 - Assignment from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**
- k. Ability to recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
Assessment indicators:
- Assignment from **MSDS 575 Ethics in Data Science**
 - Project from **MSDS 580 Research Methods**
 - Capstone Project from **MSDS 590 Capstone**
- l. Ability to function effectively as a member and leader of a team engaged in activities appropriate to the program's discipline.
Assessment indicators:
- Project from **MSDS545: Computational Software Engineering**
 - Project from **MSDS 565 Predictive Modeling and Analytics**
 - Project from **MSDS 575 Ethics in Data Science**
- m. Ability to apply knowledge of computer science and mathematical statistics appropriate to the discipline. Assessment indicators:
- Project from **MSDS545: Computational Software Engineering**
 - Project from **MSDS 565 Predictive Modeling and Analytics**
 - Project from **MSDS 580 Research Methods**
- n. Ability to apply knowledge of cybersecurity and mathematical statistics appropriate to the discipline. Assessment indicators:
- Project from **MSBD 555 Big Data Management and Analytics**
 - Project from **MSDS 565 Predictive Modeling and Analytics**
 - Project from **MSDS 580 Research Methods**

Graduate Certificates

Graduate Certificate in Biomedical Data Science

Completion of the Graduate Certificate in Biomedical Data Science requires **18 graduate credit hours**. This includes the following **5 core courses (15 credit hours)**:

1. MSBD 510 Computer Programming Foundations for Biomedical Data Science (3 credit hours)
2. MSBD 515 Biomedical Data Conscientiousness (3 credit hours)
3. MSBD 520 Introduction to Biostatistics (3 credit hours)
4. MSBD 525 Data Management Foundations for Biomedical Data Science (3 credit hours)
5. MSBD 530 Statistical Methods for Biomedical Data Science (3 credit hours)

Students choose one of two Concentration Tracks, each comprising **1 Course (3 credit hours)**:

Precision Medicine Informatics Concentration Track:

- MSBD 535 Precision Medicine Informatics (3 credit hours)

Population Health Informatics Concentration Track:

- MSBD 536 Population Health Informatics (3 credit hours)

Learning Outcomes for the Graduate Certificate in Biomedical Data Science Program

By the time of completion, recipients of the Graduate Certificate in Biomedical Data Science will be expected to have:

- a. An understanding of the nature and purpose of a range of standard schemata, frameworks, languages, vocabularies, formats, models, and rule-sets.
- b. An understanding of the statistical difference between observations and variables, along with knowledge of the different scales of measurement.
- c. an ability to use a range of (general) techniques and (specific) software tools for the storage, description, categorization, linking, and discovery of resources.
- d. The ability to pull data from disparate sources needed to perform analysis for a given real-world biomedical data science problem and prepare the data for statistical analysis and decision modeling.
- e. The ability to apply knowledge of biomedical data science and mathematical statistics appropriate to the discipline.

How the Student Learning Outcomes will be assessed

- a. An understanding of the nature and purpose of a range of standard schemata, frameworks, languages, vocabularies, formats, models, and rule-sets.

Assessment indicator: Assignment from **MSBD 515 Data Conscientiousness**

- b. An understanding of the statistical difference between observations and variables, along with knowledge of the different scales of measurement.

Assessment indicator: Assignment from **MSBD 520 Introduction to Biostatistics**

- c. The ability to use a range of (general) techniques and (specific) software tools for the storage, description, categorization, linking, and discovery of resources.

Assessment indicator: Project from **MSBD 525 Data Management Foundations for Data Science**

- d. The ability to pull data from disparate sources needed to perform analysis for a given real-world biomedical data science problem and prepare the data for statistical analysis and decision modeling.

Assessment indicator: Project from **MSBD 525 Data Management Foundations for Data Science**

- e. The ability to apply knowledge of biomedical data science and mathematical statistics appropriate to the discipline.

Assessment indicator: Assignment from **MSBD 530 Statistical Methods for Biomedical Data Science**

Graduate Certificate in Data Science

Completion of the Graduate Certificate in Data Science requires **18 graduate credit hours**. This includes the following **5 core courses (15 credit hours)**:

1. MSDS 510 Computer Programming Foundations for Data Science (3 credit hours)
2. MSDS 515 Data Conscientiousness (3 credit hours)
3. MSDS 520 Mathematical and Statistical Foundations for Data Science (3 credit hours)
4. MSDS 525 Data Management Foundations for Data Science (3 credit hours)
5. MSDS 530 Statistical Inference and Modeling (3 credit hours)
6. MSDS 535 Further Mainstream Programming Languages for Data Science (3 credit hours)

Learning Outcomes for the Graduate Certificate in Data Science Program

By the time of completion, recipients of the Graduate Certificate in Data Science will be expected to have:

- a. *an understanding of the nature and purpose of a range of standard schemata, frameworks, languages, vocabularies, formats, models, and rule-sets.*
- b. *an understanding of the statistical difference between observations and variables, along with knowledge of the different scales of measurement.*
- c. *an ability to use a range of (general) techniques and (specific) software tools for the storage, description, categorization, linking, and discovery of resources.*
- d. *an ability to pull data from disparate sources needed to perform analysis for a given real-world biomedical data science problem, and prepare the data for statistical analysis and decision modeling.*
- e. *an ability to apply knowledge of data science and mathematical statistics appropriate to the discipline.*

How the Student Learning Outcomes will be assessed

- a. *an understanding of the nature and purpose of a range of standard schemata, frameworks, languages, vocabularies, formats, models, and rule-sets.*

Assessment indicator: Assignment from **MSDS 515 Data Conscientiousness**

- b. *an understanding of the statistical difference between observations and variables, along with knowledge of the different scales of measurement.*

Assessment indicator: Assignment from **MSDS 520 Mathematical and Statistical Foundations for Data Science**

- c. *an ability to use a range of (general) techniques and (specific) software tools for the storage, description, categorization, linking, and discovery of resources.* Assessment indicator: Project from **MSDS 525 Data Management Foundations for Data Science**

- d. *an ability to pull data from disparate sources needed to perform analysis for a given real-world biomedical data science problem and prepare the data for statistical analysis and decision modeling.* Assessment indicator: Project from **MSDS 525 Data Management Foundations for Data Science**

- e. *an ability to apply knowledge of biomedical data science and mathematical statistics appropriate to the discipline.* Assessment indicator: Assignment from **MSDS 530 Statistical Inference and Modeling**

Graduate Certificate in AI and Data Analytics for Health Systems

Completion of the Graduate Certificate in AI and Data Analytics for Health Systems requires **9 graduate credit hours**. This includes the following **1 core course (3 credit hours)** and 2 elective courses.

Required Course: MSDS 510 Computer Programming Foundations for Data Science (3 credit hours)

List of Recommended Electives:

- MSDS 515 Data Conscientiousness (3 credit hours)
- MSDS 520 Mathematical and Statistical Foundations for Data Science (3 credit hours)
- MSDS 525 Data Management Foundations for Data Science (3 credit hours)
- MSDS 535 Further Mainstream Programming Languages for Data Science (3 credit hours)
- MSDS 545 Introduction to Computational Software Engineering (3 credit hours)
- MSDS 560 Natural Language Processing (3 credit hours)
- MSDS 550 Computational Machine Learning (3 credit hours)
- MSDS 565 Predictive Modeling Analytics (3 credit hours)
- MSDS 730 Deep Learning (3 credit hours)
- MSBD 540 Introduction to Artificial Intelligence in Healthcare (3 credit hours)
- MSBD 550 Applied Machine Learning for Biomedical Data Science (3 credit hours)
- Or any other course recommended by the Faculty Advisor

Learning Outcomes for the Graduate Certificate in AI and Data Analytics for Health Systems Program

Upon completion, recipients of the Graduate Certificate in AI and Data Analytics for Health Systems will be able to:

1. **Analyze complex health system problems using computing and data science principles:** Apply principles of computing, statistics, data analytics, and relevant health system disciplines to define, examine, and develop solutions for complex health system problems.
2. **Design, implement, and evaluate AI and data analytics solutions:** Develop, implement, and evaluate computing-based solutions, including predictive analytics, machine learning, natural language processing, and deep learning methods, to meet requirements in healthcare and health system contexts.
3. **Apply the data science lifecycle to health system data:** Use appropriate theories, techniques, tools, and workflows to acquire, manage, preprocess, analyze, model, interpret, and communicate findings from structured and unstructured health system data to address stakeholder needs.
4. **Make informed judgments regarding responsible AI and data use in health systems:** Recognize professional, legal, ethical, privacy, fairness, algorithmic bias, and health equity considerations and apply them in the development and use of AI and data analytics solutions for health systems.

How the Student Learning Outcomes will be assessed

- Analyze complex health system problems using computing and data science principles.

- Assessment indicator: Assignments, quizzes, exams, and applied capstone project requiring computational analysis of real-world medical datasets.
- Design, implement, and evaluate AI and data analytics solutions.
 - Assessment indicators: Assignments, quizzes, exams, and an applied capstone project that requires identifying tools and technologies for data storage, discovering resources, evaluating machine learning algorithms, and preparing data for statistical analysis and decision modeling.
- Apply the data science lifecycle to health system data.
 - Assessment indicator: Assignments, quizzes, exams, and applied capstone project requiring data collection and preprocessing techniques on disparate data sources, visualizations, interpretation, and applying machine learning algorithms for real-world concepts.
- Make informed judgments regarding responsible AI and data use in health systems.
 - Assessment indicators: Assignments, project documentation, reports, and an applied capstone project that demonstrate the application of ethical practices and frameworks, including privacy, reproducibility, and data governance, in data collection and analysis techniques for healthcare data.

Graduate Certificate in AI and Data Analytics for Health Systems

Completion of the Graduate Certificate in AI and Data Analytics for Health Systems requires **9 graduate credit hours**. This includes the following **1 core course (3 credit hours)** and 2 elective courses.

Required Course: MSDS 510 Computer Programming Foundations for Data Science (*3 credit hours*)

List of Recommended Electives:

- MSDS 515 Data Conscientiousness (*3 credit hours*)
- MSDS 520 Mathematical and Statistical Foundations for Data Science (*3 credit hours*)
- MSDS 525 Data Management Foundations for Data Science (*3 credit hours*)
- MSDS 535 Further Mainstream Programming Languages for Data Science (*3 credit hours*)
- MSDS 545 Introduction to Computational Software Engineering (*3 credit hours*)
- MSDS 550 Computational Machine Learning (*3 credit hours*)
- MSDS 560 Natural Language Processing (*3 credit hours*)
- MSDS 565 Predictive Modeling Analytics (*3 credit hours*)
- MSBD 540 Introduction to Artificial Intelligence in Healthcare (*3 credit hours*)
- MSBD 550 Applied Machine Learning for Biomedical Data Science (*3 credit hours*)
- Or any other course recommended by the Faculty Advisor

Learning Outcomes for the Graduate Certificate in AI and Data Analytics for Health Systems Program

Upon completion, recipients of the Graduate Certificate in AI and Data Analytics for Health Systems will be able to:

5. **Analyze complex health system problems using computing and data science principles:**
Apply principles of computing, statistics, data analytics, and relevant health system disciplines to define, examine, and develop solutions for complex health system problems.

6. **Design, implement, and evaluate AI and data analytics solutions:** Develop, implement, and evaluate computing-based solutions, including predictive analytics, machine learning, natural language processing, and deep learning methods, to meet requirements in healthcare and health system contexts.
7. **Apply the data science lifecycle to health system data:** Use appropriate theories, techniques, tools, and workflows to acquire, manage, preprocess, analyze, model, interpret, and communicate findings from structured and unstructured health system data to address stakeholder needs.
8. **Make informed judgments regarding responsible AI and data use in health systems:** Recognize professional, legal, ethical, privacy, fairness, algorithmic bias, and health equity considerations and apply them in the development and use of AI and data analytics solutions for health systems.

How the Student Learning Outcomes will be assessed

- Analyze complex health system problems using computing and data science principles.
 - Assessment indicator: Assignments, quizzes, exams, and applied capstone project requiring computational analysis of real-world medical datasets.
- Design, implement, and evaluate AI and data analytics solutions.
 - Assessment indicators: Assignments, quizzes, exams, and an applied capstone project that requires identifying tools and technologies for data storage, discovering resources, evaluating machine learning algorithms, and preparing data for statistical analysis and decision modeling.
- Apply the data science lifecycle to health system data.
 - Assessment indicator: Assignments, quizzes, exams, and applied capstone project requiring data collection and preprocessing techniques on disparate data sources, visualizations, interpretation, and applying machine learning algorithms for real-world concepts.
- Make informed judgments regarding responsible AI and data use in health systems.
 - Assessment indicators: Assignments, project documentation, reports, and an applied capstone project that demonstrate the application of ethical practices and frameworks, including privacy, reproducibility, and data governance, in data collection and analysis techniques for healthcare data.

Graduate Certificate in Bioinformatics & Genomics Data Foundations

Completion of the Graduate Certificate in Bioinformatics & Genomics Data Foundations requires 9 graduate **credit hours**. This includes the following **1 core course (3 credit hours)** and **2 elective courses (6 credits hours)**.

Required Course: MSBD 501: Introduction to Bioinformatics (3 credit hours)

List of Recommended Electives:

- MSBD 502: Computational Biology (3 credit hours)
- MSBD 525: Data Management Foundations for Data Science (3 credit hours)
- MSBI 530: Mathematical Modeling for Bioinformatics (3 credit hours)
- MSBI 555: Computational Genomics (3 credit hours)
- MSBI 565: Computational Biomedicine and Drug Discovery (3 credit hours)
- Or any other course recommended by the Faculty Advisor

Learning Outcomes for the Graduate Certificate in Bioinformatics & Genomics Data Foundations

Upon completion of the Graduate Certificate in Bioinformatics & Genomics Data Foundations, students will be able to:

- Analyze biological and genomic data problems using bioinformatics, computational, and data science principles: Apply foundational concepts in genomics, molecular biology, bioinformatics, computing, and statistics to define, investigate, and address biological and biomedical research questions using data-driven approaches.
- Design, implement, and evaluate bioinformatics and computational genomics solutions: Develop and apply bioinformatics workflows, computational methods, and analytical techniques for processing, managing, analyzing, and interpreting genomic and biomedical datasets.
- Apply the bioinformatics data analysis lifecycle to genomic and biomedical data: Use appropriate tools, technologies, and best practices to acquire, manage, preprocess, analyze, visualize, interpret, and communicate findings from biological, genomic, and health-related datasets in support of scientific discovery and decision-making.
- Demonstrate ethical, responsible, and reproducible practices in bioinformatics and genomics data science: Recognize and apply professional, ethical, legal, privacy, security, reproducibility, and data stewardship principles in the handling, analysis, interpretation, and communication of genomic and biomedical information.

How the Student Learning Outcomes will be assessed

- Ability to analyze biological and genomic data problems using bioinformatics, computational, and data science principles.
 - a. Assessment indicator: Assignments and projects from MSBD 501 Introduction to Bioinformatics, including analysis and interpretation of biological and genomic datasets.
- Ability to design, implement, and evaluate bioinformatics and computational genomics solutions.
 - a. Assessment indicator: Projects from MSBD 502 Computational Biology, MSBI 555 Computational Genomics, and the Applied Genomics Capstone Project.
- Ability to apply the bioinformatics data analysis lifecycle to genomic and biomedical data.
 - a. Assessment indicator: Projects and presentations from certificate coursework involving data acquisition, management, preprocessing, analysis, visualization, interpretation, and communication of findings from genomic and biomedical datasets.

- Ability to demonstrate ethical, responsible, and reproducible practices in bioinformatics and genomics data science.
 - a. Assessment indicator: Assignments, project documentation, and the Applied Genomics Capstone Project demonstrating ethical, responsible, and reproducible use of genomic and biomedical data.

Graduate Certificate in Cybersecurity for Health & Medical Data

Completion of the Graduate Certificate in Cybersecurity for Health & Medical Data requires 9 graduate credit **hours**. This includes the following **1 core course (3 credit hours)** and 2 elective courses.

Required Course: MSCA525 Introduction to Cybersecurity (3 credit hours)

List of Recommended Electives:

- MSCA 550 Digital Forensics & Ethical Hacking (3 credit hours)
- MSCA 560 Distributed Systems & Network Security (3 credit hours)
- MSDS 740 Big Data Privacy & Security (3 credit hours)
- MSDS 655 AI in Cybersecurity (3 credit hours)
- MSDS 575 Ethics in Data Science (3 credit hours)
- Or any other course recommended by the Faculty Advisor

Learning Outcomes for the Graduate Certificate in AI and Data Analytics for Health Systems Program

By the time of completion, recipients of the Graduate Certificate in Cybersecurity for Health & Medical Data will be expected to have:

- an understanding of core cybersecurity principles, including the CIA triad, threat and vulnerability management, and security controls applicable to health information systems.
- an understanding of health-specific regulatory frameworks and standards, including the HIPAA Security Rule and NIST-aligned practices, and their application to clinical and operational environments.
- an ability to use a range of techniques and tools for securing distributed systems and networks, including VPNs, firewalls, and identity and access management in healthcare contexts.
- an ability to perform foundational digital forensics tasks — including log analysis, evidence collection, and chain-of-custody documentation — and apply incident response procedures to simulated healthcare breach scenarios.
- an ability to apply knowledge of data privacy, ethical reasoning, and regulatory compliance appropriate to the protection of health and medical data.

How the Student Learning Outcomes will be assessed

- *an understanding of core cybersecurity principles, including the CIA triad, threat and vulnerability management, and security controls applicable to health information systems.*
 - *Assessment indicator: Assignment from MSCA 525 Introduction to Cybersecurity*
- *an understanding of health-specific regulatory frameworks and standards, including the HIPAA Security Rule and NIST-aligned practices, and their application to clinical and operational environments.*
 - *Assessment indicator: Assignment from MSCA 525 Introduction to Cybersecurity*
- *an ability to use a range of techniques and tools for securing distributed systems and networks, including VPNs, firewalls, and identity and access management in healthcare contexts.*
 - *Assessment indicator: Project from MSCA 560 Distributed Systems & Network Security*

- *an ability to perform foundational digital forensics tasks and apply incident response procedures to simulated healthcare breach scenarios.*
 - *Assessment indicator: Project from MSCA 550 Digital Forensics & Ethical Hacking*
- *an ability to apply knowledge of data privacy, ethical reasoning, and regulatory compliance appropriate to the protection of health and medical data.*
 - *Assessment indicator: Assignment from MSDS 740 Big Data Privacy & Security*

Admissions

The SACS Admissions Committees have the responsibility to review all applications for admission and full authority to accept or reject any applicant. The committees are charged with the responsibility of selecting students who will make suitable candidates for SACS 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, SACS, (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 may also be admitted to a SACS graduate program as a special student, auditing student, or with conditional admission.

Applications

The Office of Admissions and Recruitment processes all applications to SACS academic programs. 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 at least two college instructors or two persons who are qualified to assess your work or academic performance; three letters of recommendation are needed for the Doctor of Philosophy (4) a report of the applicant's scores on the Graduate Record Examination (GRE). International students must submit TOEFL scores and any education received outside the U.S. must be evaluated by World Education Services (WES); (5) a personal statement focused on the applicant's academic strengths, personal and career goals, and how the graduate program will contribute to the achievement of those goals, and (6) on-campus (or virtual) interview.

Procedures for Admission

The application deadlines are April 1 for fall matriculation and December 1 for spring matriculation. There is a \$50 nonrefundable application fee. However, the College has the right to waive the fee for existing MMC students belonging to other programs. Ph.D. applicants may request a fee waiver if they have participated in NIH-NIGMS programs such as Minority Access to Research Careers (MARC), Research Initiative for Scientific Enhancement (RISE), Post baccalaureate Research Education Program (PREP) or other research enhancement programs.

Requirements for Admission

In addition to the above application requirements, eligible students must meet the following requirements:

- Educational equivalent of at least a bachelor's degree from a regionally accredited university in the U.S.
- Students are expected to have a working familiarity with the discipline of data science and analytics and general knowledge about the impacts of big data in businesses and corporations. All students should have a working knowledge of all aspects of Microsoft Office; and should be familiar with Internet access and usage.
- Grade Point Average (GPA) of 3.0 on undergraduate work with a minimum of a "B" (GPA of 3.00) in undergraduate Calculus, Elementary Statistics, or their equivalents.

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. 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.

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.

Special Student/ Non-Degree Seeking

A person may be admitted by the SACS 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 9 graded hours of graduate course work are completed. (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 SACS.

All correspondence concerning admissions should be addressed to the Office of Admissions: admissions@apply.mmc.edu. Each applicant must meet the specific requirements of the SACS.

Readmission

An application for readmission must be made to the Associate Dean of Admissions & Recruitment 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 School of Applied Computational Sciences 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

Students may receive transfer credit from another accredited institution, after approval by the Department Chair.

- **Ph.D. Program(s):** Students enrolled in the Ph.D. Program may transfer **up to** twenty-four (24) credit hours contingent to the approval (see below for instructions).
- **Master of Science Program(s):** Students enrolled in the master's Program may transfer up to six (6) credit hours.
- **Graduate Certificate Program(s):** Students enrolled in a SACS Graduate Certificate program may not utilize transfer credit toward the completion of the Certificate.

Core classes must be taken as part of the student's course of study. In order to be considered for transfer, students must submit a written request and submit a course syllabus for review and approval. External transfer credits must be initiated before the end of the add drop period of the first semester of the first year.

Master to Ph.D. Transition

Ph.D. students who have completed a Master of Science program at SACS may transition directly into the second year of the Ph.D. program. The following transitions are available:

1. MS in Biomedical Data Science can transition to Ph.D. in Biomedical Data Science or Ph.D. in Data Science
2. MS in Data Science can transition to Ph.D. in Biomedical Data Science or Ph.D. in Data Science.

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 degree may receive graduate credit, with approval of the graduate dean, for some of the courses taken at Meharry.

Other coursework that is not eligible for transfer toward a graduate degree includes:

- Experiential learning
- Credit by examination
- Advanced placement
- Professional certificates
- Non-credit courses
- Audited courses
- Classes without a qualifying grade

Enrollment Status

A full-time student must register for a minimum of nine (9) semester hours during the fall and spring semesters and six hours during the summer semester. A student in a SACS MS/PhD Program may be considered full-time by registering for less than the full-time status only after having completed the required coursework and is working on an approved culminating Capstone/Dissertation.

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 the dean's excuses are made in the Office of the School of Applied Computational Sciences, and appropriate documentation is required at that time.

Academic Regulations

Requirements for Doctor of Philosophy

To receive the Ph.D., a student must a) complete 75 hours of the appropriate coursework, b) develop and conduct original and advised Dissertation c) defend the Dissertation to the advisor, program director, and faculty committee, and d) must have the endorsement of the advisor, program director, and faculty committee.

Master of Science

To receive the Master of Science, a student must a) complete 42 hours of the appropriate coursework, b) develop and conduct original and advised Capstone research project, c) present the Capstone research project to the Capstone advisor, program director, and faculty committee, and d) must have the endorsement of the Capstone advisor, program director, and faculty committee.

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 computational sciences, biomedical sciences, or public health. Their educational experiences are directed towards serving the underserved communities, focused on diseases, health conditions, and other determinants of health that affect ethnic minority populations, the students are partnered with others at Meharry Medical College engaged in this mission.

The SACS is a caring and supportive community that encourages professionalism, excellence, and 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

The SACS has an Office for Professional Development, which provides a professional development curriculum to broaden and complement traditional research training in computational sciences. The objectives of the office are 1) to develop professional skills and responsibilities needed to succeed in computational science; 2) to support career planning; and 3) to expose students to diverse career options and proficiencies needed for success. The strategy includes a series of workshops and seminars to provide training in both written and oral communication, career identification and planning using an Individual Development Plan (IDP), interviewing skills, CV/resume, and cover letter writing, networking strategies, and delivering powerful oral presentations. In addition, the office provides a career seminar series and invited speakers include successful Meharry alumni,

employers from the NIH/NSF/DoD, industry and other researchers/administrators associated with graduate computational sciences programs around the country. The goal of the seminar series is to expose students to the breadth of careers in the computational sciences research workforce as well as provide them with an opportunity for networking with potential employers.

Examinations and Grades

Grades for all courses taken for graduate credit are A, A-, B+, B, B-, C+, C, F, S, U, IP, and I. Grade point averages (GPA) are calculated on the basis of A=4, A-=3.75, B+=3.5, B=3, B-=2.75, C+=2.5, C=2, F= 0. S and U grades are not computed into students' GPA and are not converted to A, A-, B+, 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 and may be given at the instructor's discretion to a student when illness, necessary absence, or other reasons beyond the control of the student prevent completion of course requirements by the end of the academic term. A student cannot receive an "I" if he/she is failing a course. 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 Admissions and 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. Whether 'WP' or 'WF', if the student returns to a particular course, he or she must take it over in its' entirety.

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.

Vanderbilt students and students from other graduate programs will receive a letter grade for the course per the requirement of their individual programs. All students will be expected to attend all class sessions, complete all assigned readings and participate in all group assignments.

Academic Standing

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

Academic Probation: a report is generated each semester to identify students' performance. If progress is considered unsatisfactory, a student will be informed of this in a letter from the School of Applied Computational Sciences (SACS) with a copy to the Program Director. The Program Director will meet with the student to develop a written plan of action to govern the student's success in the program.

A student whose GPA does not reach 3.00 by the end of a designated period of academic probation may be

dismissed from the Program 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 Program. In any academic year, students must pass at least 79% of coursework (at least 33 credit hours) with a grade of "B" or higher. A graduate student may become academically ineligible to continue in the Program 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 Master's Program: (1) receives a grade of "C" in MSDS 510 Computer Programming Foundations for Data Science, MSDS 520 Mathematical and Statistical Foundations for Data Science, MSBD 520 Introduction to Biostatistics, MSDS 525 Data Management Foundations for Data Science, or MSDS 580 Research Methods, the course must be repeated and a grade of "B" or better must be received, (2) receives a grade of "C" in any two Biomedical Data Science Concentration Track courses, the courses must be repeated and a grade of "B" or better must be received in each course (a student may be placed on probation; if this is the case, a written plan of action is to be given to the Program Director signed by the student a week after the student is placed on probation), (3) receives one grade of "F" will result in automatic probation (a written plan of action is to be given to the Program Director signed by the student a week after a student is placed on probation), and (4) receives two grades of "F" will automatically be dismissed when his/her GPA is below 3.0 that semester. When a course is repeated, the first grade will remain on the student's transcript and be calculated as part of the student's grade point average. Students are allowed to repeat a course only once.

Academic Dismissal: All cases go before the SACS Student Evaluation and Promotion Committee, which is made up of members from each of the Graduate Programs. Graduate students not meeting the written terms of their academic probation may be academically dismissed from a program. Such dismissals shall be done in a timely fashion, but no later than three weeks after the completion of the term.

Adding or Withdrawing from Course(s)

If a student wishes to add or drop a course(s), he or she can do so via WorkDay Self-Service during the designated add/drop period noted on the academic calendar. The student is first required to get the approval of their respective division chairperson or division director and/or academic advisee prior to the add/drop period, and following advisement and approval, will then receive a unique registration pin number to use to add or drop a course(s) via WorkDay Self-Service. A student may add or drop a course prior to the end of the 1st week of classes and prior to the end of the 1st week of classes during the summer session. A student may receive a grade of "W" if he/she withdraws from a course prior to the end of the 3rd week of classes. However, grades for courses that 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 Admissions and 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 SACS 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 SACS or has not registered for two consecutive semesters, he/she must also reapply to the SACS. Provided the student left in good standing, in these situations he/she needs only to fill out a new application, 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 SACS Admissions Committee who will then make a recommendation to the Dean.

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 SACS 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 Admissions and Records or Office of Student Academic Affairs. The deadline for receipt of the card is given by these Offices. 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 SACS 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, June, 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 Program Director or the Department Chair informing the dean that all degree requirements have been completed;

- Complete the Graduate Program Self-Assessment Student Questionnaire and return it to the Dean's Office; and
- Complete all class evaluations, MMC assessments and the Exit Survey.

SACS 2026-2027 Academic Calendar



SCHOOL OF APPLIED COMPUTATIONAL SCIENCES

Academic Year 2026-2027

Friday, July 3, 2026	* Observation of the 4th of July Holiday
Thursday, July 23, 2026	SACS Fall 2026 New Student Orientation
Friday, July 24, 2026	Begins - New Students Academic Advising for Add/Drop Period
Monday, August 3, 2026	Last Day of Summer classes
Tuesday, August 4, 2026	All Grades due in Workday
Monday, August 10, 2026	Fall 2026 Classes Begin
Monday, August 24, 2026	Ends - Fall Academic Advising for Add/Drop Period
Monday, September 7, 2026	*Labor Day Holiday
Thursday, September 17, 2026	Constitution Day
Monday, October 5, 2026	Convocation
Monday, November 9, 2026	Begins - Spring Academic Advising for Add/Drop Period
Thursday, November 19, 2026	Fall 2026 Classes End
Friday, November 20, 2026	All Grades Due in Workday
Thursday, November 26-27, 2026	*Thanksgiving Holiday
Friday, December 4, 2026	SEAPC Meeting
Monday, December 7, 2026	Spring Orientation and Registration
Thursday, January 7, 2027	Spring 2027 Classes Begin
Friday, January 15, 2027	ML King Remembrance Program
Monday, January 18, 2027	* Rev. Dr. Martin Luther King, Jr. Holiday
Tuesday, January 19, 2027	Ends - Spring Academic Advising for Add/Drop Period
Wednesday, March 3-4, 2027	MeHarry Research Symposium (to be confirmed by CRI)



SCHOOL OF APPLIED COMPUTATIONAL SCIENCES

March 8-12, 2027	*Spring Break
Wednesday, March 31, 2027	SEAPC Meeting (All Programs)
Monday, April 12, 2027	Summer 2027 Advisement and registration begins
Friday, March 26, 2027	* Good Friday - Meharry Holiday
Wednesday, April 28, 2027	Spring 2027 Classes End
Thursday, April 29, 2027	All Grades due in Workday
Friday, April 30, 2027	SEAPC Meeting - Graduates only
Friday, April 30, 2027	Begins - Summer Academic Advising for Add/Drop Period
Friday, May 7, 2027	SEAPC Meeting
Monday, May 10, 2027	Summer 2027 Classes Begin
Friday, May 14, 2027	Ends - Summer Academic Advising for Add/Drop Period
Friday, May 14, 2027	Hooding for Masters
Saturday, May 15, 2027	Commencement
Monday, May 31, 2027	* Memorial Day Holiday
Wednesday, June 2, 2027	Fall 2027 Registration
Friday, June 18, 2027	*Juneteenth
Monday, July 5, 2027	* Observation of the 4th of July Holiday
Thursday, July 23, 2027	SACS Fall 2027 New Student Orientation
Friday, July 23, 2027	Begins - New Students Academic Advising for Add/Drop Period
Monday, August 2, 2027	Last Day of Summer classes
Tuesday, August 3, 2027	All Grades due in Workday

Financial Information

Tuition and Fees

We know that pursuing our graduate data science programs degrees require a commitment of time, resources and finances. The following chart lists tuition and fees for students according to the semester they begin a program. Tuition rates will remain the same for each cohort. Please also carefully read the information below about scholarship opportunities and applying for financial aid. Students must complete a FAFSA and MAP to be considered for scholarships.

Tuition and Fees for 2026-2027 Academic Year

Meharry Medical College
"Estimated" Budgets For Financial Aid - School of Computational Sciences (SACS)
2026-27 Academic Year

The following budget embodies what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Applied Computational Science Program. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.

COA Components	Monthly	MS- Data Science 12 months	MS- AI Bioinformatics 12 months	MS- Computer Science CyberSecurity 12 months	MS- Biomedical Data Science 12 months	All Masters Year 2 12 months	Certificate AI & Data Analytics 12 mo	Certificate Cyber for Hlth 12 mo	Certificate Bioinfor & Geno 12 mo
Direct costs - paid to the College									
Tuition		\$22,050	\$22,050	\$22,050	\$22,050	\$22,050	\$7,166	\$7,166	\$7,166
Fees		\$7,774	\$7,774	\$7,774	\$7,774	\$8,124	\$8,124	\$8,124	\$8,124
Indirect costs - Living expenses									
Books & Supplies		\$1,216	\$1,216	\$1,216	\$1,216	\$1,216	\$1,216	\$1,216	\$1,216
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200
Food (Monthly food allowance)	\$550	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200
Miscellaneous*		\$3,216	\$3,216	\$3,216	\$3,216	\$3,600	\$1,500	\$1,500	\$1,500
2026-27 COA TOTALS	\$3,825	\$80,156	\$80,156	\$80,156	\$80,156	\$80,890	\$63,906	\$63,906	\$63,906
* Includes	\$1,500	Medical and dental incidentals not covered by health insurance							
	\$1,500	Laptop allowance (1st years only)							
	\$2,100	Loan fees							
	\$216	Loan fees - 1st year							
Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.									
PLEASE NOTE: credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.									
Tuition and the health insurance fee will be split evenly between both fall and spring semesters.									
First year admits: Programs beginning after July 1, 2026 will no longer be eligible to receive Graduate PLUS loan funding. Must secure private loan.									
Subject To Change									
2026-27 SACS FA COA									

2026-27 Academic Year

The following budget embodies what the Office of Financial Aid deems as reasonable costs associated with attending Meharry Medical College's School of Applied Computational Science Program. We anticipate that most students will live within the budget amounts set forth. However, those with extenuating circumstances will be considered on a case-by-case basis for a possible cost of attendance increase. Documentation must be submitted and approved before a budget increase.

COA Components	Monthly	PhD		PhD		PhD		Grad Certificate Data Science	Grad Certificate Biomedical Data Science	Grad Certificate Data Wrangling
		PhD Biomedical Data Science	PhD Data Science	Biomedical Data Science	Data Science	Biomedical Data Science	Data Science			
		Year 1 12 months	Year 1 12 months	Years 2 - 3 12 months	Years 2 - 3 12 months	Year 4 12 months	Year 4 12 months			
Tuition		\$37,800	\$37,800	\$37,800	\$37,800	\$37,800	\$37,800	\$19,476	\$19,476	\$9,288
Fees		\$7,774	\$7,774	\$7,774	\$7,774	\$8,124	\$8,124	\$8,124	\$8,124	\$8,124
Books & Supplies		\$1,216	\$1,216	\$1,216	\$1,216	\$1,216	\$1,216	\$1,216	\$1,216	\$1,216
Housing (incl. rent (~\$1,800), utilities, water and renter's insurance)	\$2,100	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200	\$25,200
Food (Monthly food allowance)	\$550	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600	\$6,600
Transportation (incl. gas, car maintenance, car insurance, license and registration)	\$575	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900
Personal (incl. clothing, food away from home, dry cleaning, entertainment, cell phone, and Internet usage)	\$600	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200	\$7,200
Miscellaneous*		\$3,216	\$3,216	\$3,600	\$3,600	\$3,600	\$3,600	\$1,500	\$1,500	\$1,500
2026-27 COA TOTALS	\$3,825	\$95,906	\$95,906	\$96,290	\$96,290	\$96,640	\$96,640	\$76,216	\$76,216	\$66,028

[illegible]

Dependent child care costs may be added, up to \$13,200, per child. Documentation must be presented on the child care facility letterhead, documenting date of enrollment, dependent's name, parent name, the cost to attend and document must be signed by the child care facility's personnel.

PLEASE NOTE: credit cards and automobile payments are NOT, and will not be, included in your cost of attendance. In addition, expenses for spouses or other family members, (including family health insurance premiums) other than child care expenses, may NOT be included.

Tuition and the health insurance fee will be split evenly between both fall and spring semesters.

First year admits: Programs beginning after July 1, 2026 will no longer be eligible to receive Graduate PLUS loan funding. Must secure private loan.

Subject To Change

2026-27 SACSE/PhD/CERT EA Budgets

** After passing the competency exam, Ph.D. students will have opportunities for funding and teaching stipends that can offset the cost of tuition, fees and other expenses.*

**** Fees are subject to change.**

Review the details of Fees and living expenses at <https://home.mmc.edu/cost-and-disbursement/>

Health Insurance

***Meharry offers student insurance to all students for an annual fee of 5,144.16. Students may elect to waive the Meharry plan, but the College does require all registered students to have health insurance.

These tables do not include expenses for room and board, books & supplies, transportation, and miscellaneous expenses. For additional information regarding these expenses and an itemized list of fees, please contact the Office of Financial Aid or visit the website: <http://www.mmc.edu/prospectivestudents/tuition-and-fees/index.html>

Payment of Tuition and Fees

Please see the information in the section entitled General Financial Information in this Academic Catalog.

Financial Assistance

We recognize that graduate school is a significant investment in your personal and professional development and Meharry Medical College is proud to announce scholarships for qualified African American students. The scholarships will be offered to students attending the master's and Ph.D. programs.

We look forward to discussing scholarships, the application process, and our academic programs with you. You can email **JeanLuc Nshimiyimana**, Director, Enrollment Management & Professional Development for the School of Applied Computational Sciences, at jnshimiyimana@mmc.edu with any questions or complete the request information form.

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 Applied Computational Sciences 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 currently enrolled second year student in the MSDS and MSBD programs who have attained the highest GPA for the immediately preceding academic year.
- **Program Awards:** These awards are given to the top currently enrolled students (exclusive of first-year students) in the MSDS and MSBD programs.

COURSE DESCRIPTIONS

CSDS 240 Data Structures and Algorithms. 3 credit hours. Pre-requisite(s): Computer programming in an object-oriented programming language, MSDS 510, or equivalent. Fundamental data structures and algorithms and the tradeoffs between different implementations. Theoretical analysis, implementation, and application. Lists, stacks, queues, heaps, dictionaries, maps, hashing, trees and balanced trees, sets, and graphs. Searching and sorting algorithms.

CSDS 300 Design and Implementation of Database Management Systems. 3 credit hours. Pre-requisite(s): CSDS 240 or equivalent. Basic concepts necessary to design and implement database systems that are free of update anomalies. Extensive use of SQL.

CSDS 340 Design and Analysis of Algorithms. 3 credit hours. Fall. Pre-requisite(s): CSDS 240. Algorithm design analysis, problem-solving strategies, proof techniques, complexity analysis, upper and lower bounds, sorting and searching, graph algorithms, geometric algorithms, probabilistic algorithms, intractability and NP-completeness, transformations, and approximation algorithms.

MSAE 510: Lean Startup & Business Models for AI, 3 credit hours.

Introduction to the application of the lean startup methodology. An assembly of methodologies to build and validate business models for AI-driven products and services. The identification of market needs, designing MVPs for an AI-powered service, and conducting data-driven experiments to validate business models.

MSAE 520: AI Product Management & Innovation, 3 credit hours.

This hands-on, interdisciplinary course equips students with the skills, frameworks and mindset to lead the creation of AI-powered products from initial concept to market launch. Students will navigate the full AI product lifecycle—covering discovery, design, development, launch, growth and maintenance—with a focus on practical product management techniques. Emphasizing entrepreneurial thinking, the course trains students to identify high-impact market opportunities and drive innovation. Through lectures, case studies, guest talks and applied projects, students will learn to balance technical feasibility, user needs and business value to deliver AI solutions that thrive in competitive markets.

MSAE 530: Agentic AI and Multi-Agent Systems, 3 credit hours.

This course introduces foundational concepts of Agent AI and Multi-Agent Systems (MAS) through an entrepreneurial lens. Students will learn how autonomous agents solve problems, collaborate and drive innovation in business. Emphasis is placed on real-world applications, ethical implications and low-code tools to ensure accessibility for non-technical learners. No prior programming experience is required.

MSAE 590: Capstone, 6 credit hours

The AI Venture Startup Studio is a **two-semester capstone** course where students **build and launch a working AI venture**—from problem selection and customer discovery through MVP (Minimum Viable Product) development and venture pitching.

MSBD 520 Introduction to Biostatistics. 3 credit hours. Pre-requisite(s): Elementary Statistics. Principles of biostatistics and the analysis of clinical and epidemiological data. Descriptions and derivations of statistical methods as well as demonstrations of these methods using SAS. Topics include basic analysis methods, elementary concepts, statistical models and applications of probability, commonly used sampling distributions, parametric and nonparametric one and two sample tests, confidence intervals, applications of analysis of two-way contingency table data, simple linear regression, and simple analysis of variance.

MSBD 530 Statistical Methods for Biomedical Data Science. 3 credit hours. Pre-requisite(s): MSDS 510, (MSDS 520 or MSBD 520). Principles of biostatistics focusing on statistical modeling approaches to the analysis of continuous, categorical, and survival data. Regression modeling includes the links between regression and analysis of variance (parameterization), multiple regression, indicator variables, use of contrasts, multiple comparison procedures and regression diagnostics. The course will generalize these modeling concepts to different types of outcome data including categorical outcomes (i.e., logistic and log-linear modeling) and survival outcomes (i.e., proportional hazards analysis). Students are taught to conduct the relevant analysis using SAS and R.

MSBD 535 Precision Medicine Informatics. 3 credit hours. Pre-requisite(s): MSDS 525, (MSDS 530 or MSBD 530).

This course will focus on the inherent translational informatics challenges, concerns, and opportunities afforded by precision medicine to provide a more accurate, personalized characterization of patient populations based on various characteristics including molecular (e.g., genomic, proteomic), clinical (e.g., comorbidities), environmental exposures, lifestyle, patient preferences and other information. Informatics is a necessary component to tackle precision medicine. This includes managing Big data, advanced concepts of a huge variety of genomic sequencing datasets emerging in the post-genomic era from several sequencing platforms, creating learning systems for knowledge generation, providing access for individual involvement, and ultimately supporting the optimal delivery of precision treatments derived from translational research.

MSBD 536 Population Health Informatics. 3 credit hours. Pre-requisite(s): MSDS 525. Uses a problem- or inquiry-based learning approach where students will take the lead in designing and implementing data- and technology-driven projects that generate data analytics-based solutions for complex public health issues and develop useful data-driven decision strategies. Students will also reproduce and replicate several case studies that illustrate the power of technologies like GIS, GPS, drones, spatial narratives, and web visualization in population health. They will examine the impact of technology on population health informatics and vice versa.

MSBD 540 Introduction to Artificial Intelligence in Healthcare. 3 credit hours. Pre-requisite(s): MSDS 510, (MSDS 520 or MSBD 520). Deep dive into recent advances in AI in healthcare, focusing on deep learning approaches for healthcare problems. Foundations of neural networks. Cutting-edge deep learning models in the context of a variety of healthcare data including image, text, multimodal and time-series data. Advanced topics on open challenges of integrating AI in a societal application such as healthcare, including interpretability, robustness, privacy and fairness.

MSBD 545 GIS for Health Informatics. 3 credit hours. Pre-requisite(s): MSDS 525. Exposes students to foundational GIS concepts, tools and methods relevant to the health sector. Special attention is given to acquiring, organizing, integrating, analyzing, and visualizing location-based health data with the aid of closed- and open-source GIS software. Students will develop practical competencies in applying GIS to achieve several goals and purposes including understanding and solving spatio-temporal population health problems in ways that are socially and ethically appropriate.

MSBD 550 Applied Machine Learning for Biomedical Data Science. 3 credit hours. Pre-requisite(s): (MSDS 530 or MSBD 530), (MSDS 535 or MSBD 540). Introduction to machine learning with biomedical applications. Survey of machine learning techniques, including traditional statistical methods, resampling techniques, model selection and regularization, tree-based methods, principal components analysis, cluster analysis, artificial neural networks, and deep learning. Students implement machine learning models with open-source software for data science. They explore data and learn from data, finding underlying patterns useful for data reduction, feature analysis, prediction, and classification.

MSBD 551 Applied Machine Learning. 3 credit hours. Pre-requisite(s): MSBD 710, MSDS 525, 530. Introduction to machine learning with business applications. Survey of machine learning techniques, including traditional statistical methods, resampling techniques, model selection and regularization, tree-based

methods, principal components analysis, cluster analysis, artificial neural networks, and deep learning. Students implement machine learning models with open-source software for data science. They explore data and learn from data, finding underlying patterns useful for data reduction, feature analysis, prediction, and classification.

MSBD 565 GIS Algorithms and Programming in Health. 3 credit hours. Pre-requisite(s): MSBD 545 or MSDS 550 or MSBD 550. Focuses on customizing or extending the tools, techniques, and capabilities of GIS to meet health application needs. Students will critique the underlying assumptions and implementation approaches of existing algorithms and advance them as needed, or code new computer programs and scripts to assist in mapping spatial distribution of disease outbreaks, modeling spread of infectious diseases, and other health-related applications. They will be exposed to HTML, CSS, JavaScript, and Python coding languages.

MSBD 566 Predictive Modeling Analysis. 3 credit hours. Pre-requisite(s): MSBD 550 or MSDS 550. Tools and techniques for building statistical or machine learning models to make predictions based on data, particularly for biomedical outcome predictions, experimentation and optimization.

MSBD 575 Ethics in Biomedical Data Science. 3 credit hours. Pre-requisite(s): MSBD 530 or MSDS 530. Analysis of ethical issues, algorithmic challenges, and policy decisions (and social implications of these decisions) that arise when addressing real-world problems through the lens of data science, and the choices we make at the different stages of the data analysis pipeline, from data collection and storage to understand feedback loops in analysis.

MSBD 580 Research Methods. 3 credit hours. Pre-requisite(s): MSBD 566, or MSDS 565, 575. The research process investigating information needs, creation, organization, flow, retrieval, and use. Stages include: research definition, question, objectives, data collection and management, data analysis and data interpretation. Techniques include: observation, interviews, questionnaires, and transaction-log analysis.

MSBD 610 Network and graph theory for Biomedical data analytics. 3 credit hours. Pre-requisite(s): Instructor approval. This course will cover the network and graph theory for biomedical data analytics. The representative power of graphs will be used to understand and model networks of biomedical data for various biomedical applications such as protein interaction networks, drug repositioning, genomics, etc. In this course, firstly a brief overview of graph theory will be provided to quantify the structure and interactions of networks, and then various methods and algorithms will be discussed to analyze the biomedical network data. Finally, a range of applications will be studied through real-world biomedical data sets.

MSBD 620 Biomedical Signal Processing. 3 credit hours. Pre-requisite(s): Instructor approval. This course introduces fundamentals of biomedical signal processing along with its applications in wearable sensor devices. The course includes topics on biomedical signal acquisition, techniques on processing the signals captured, including time domain approaches for event detection, time-varying signal processing for understanding the dynamical aspects of complex biomedical systems, and finally the application of machine learning algorithms to build predictive models for early insights on diseases.

MSBD 720 Advanced Biostatistics. 3 credit hours. Pre-requisite(s): MSBD 525 or 710, or equivalent. Utilize current statistical techniques to assess and analyze biomedical and public health related data. Read and critique the use of such techniques in published research. Review of linear models, matrix algebra, and multiple analysis of variance. Introduction to random effects models, understanding and computing power for the GLM, GLM assumption diagnostics, transformations, polynomial regression, coding schemes for regression, multicollinearity. Determine what analytical approaches are appropriate under different research scenarios.

MSBD 725 Advanced Scientific Computing: Stochastic Methods for Data Analysis, Inference and Optimization. 3 credit hours. Pre-requisite(s): MSBD 535. Study of Monte Carlo methods, a diverse class of algorithms that rely on repeated random sampling to compute the solution to problems whose solution space is too large to explore systematically or whose systemic behavior is too complex to model. Introduction to important principles of Monte Carlo techniques and their power. Bayesian analysis and Markov chain Monte Carlo samplers, slice sampling, multi-grid Monte Carlo, Hamiltonian Monte Carlo, parallel tempering and multi-nested methods, and streaming methods such as particle filters/sequential Monte Carlo. Related topics in stochastic optimization and inference such as genetic algorithms, simulated annealing, probabilistic Gaussian models, and Gaussian processes. Applications to Bayesian inference and machine learning. Python or R for all programming assignments and projects.

MSBD 726 Biomedical Imaging, Processing and Analysis. 3 credit hours. Pre-requisite(s): MSBD 725. Study of biomedical imaging and diagnostics concepts and methods, including mathematical treatment of tensor data structures, image processing, and methods of analysis. Typical data sets and studies may include radiology and pathology, e.g. CT, PET, SPECT, MRI, microscopy, ultrasound, and hyperspectral data. Computational studies may be performed in R, Julia, or Python. Upon completion of course, students should be able to apply AI and ML methods (from prior courses) to various biomedical diagnostic imaging.

MSBD 730 Advanced Deep Learning. 3 credit hours. Pre-requisite(s): Instructor approval. Advanced deep learning is used on data systems in many ways. The course introduces students to recent developments and advanced state-of-the-art methods in machine learning using deep learning and presents the mathematical, statistical, and computational challenges of building stable representations for high-dimensional data, such as images, text, and electronic health records. It aims to help students to become familiar with several deep learning methods, and to code them efficiently in Python using the current Pytorch package.

MSBD 735 Advanced Epidemiology for Public Health. 3 credit hours. Pre-requisite(s): Instructor approval. Epidemiology is a discipline that is essential for understating and solving public health problems. It is a study of advanced analytical methods, tools, and study designs used to investigate disease transmission, chronic illness, and other public health phenomena. It provides a means of assessing the magnitude of public health problems and the success of interventions designed to control them. This course introduces students to the principles of essential issues in epidemiologic methodology. The focus is on how and why a given method, design, or approach might help us explain population health. The emphasis is on the strengths, limitations, and potential alternatives for a given approach. The origins, use, and potential of both classic and cutting-edge methods will be introduced.

MSBD 736 Ethical, Legal and Societal Issues in Healthcare. 3 credit hours. Pre-requisite(s): Instructor approval. Examination of case studies. Introduction to health care law and ethics, making ethical decisions, contracts, medical records and informed consent, privacy law and HIPAA.

MSBD 740 Privacy and Security in Healthcare. 3 credit hours. Pre-requisite(s): None. Security issues related to the safeguarding of sensitive personal and corporate information against inadvertent disclosure. Policy and societal questions concerning the value of security and privacy regulations, the real-world effects of data breaches on individuals and businesses, and the balancing of interests among individuals, government, and enterprises. Current and proposed laws and regulations that govern information security and privacy. Private sector regulatory efforts and self-help measures. Emerging technologies that may affect security and privacy concerns; and issues related to the development of enterprise data security programs, policies, and procedures that take into account the requirements of all relevant constituencies; e.g., technical, business, and legal.

MSBD 755 Special Topics. 3 credit hours. Pre-requisite(s): Instructor approval. Special topics of interest may be offered on demand based upon faculty and student Ph.D. research opportunities or needs.

MSBD 750 Directed Reading and Research. *Variable hours per semester may be offered (1–3 hours).* The directed reading and research course provides students an opportunity to delve into a special topic of interest related to biomedical data science selected by the student under the guidance of a faculty member. The student and faculty member meet weekly to discuss the readings; the student will be required to write a comprehensive review paper on the semester's reading.

MSBD 800 Candidacy Exam. 1 credit hour. Pre-requisite(s): Instructor approval. Candidacy Exam to demonstrate advanced knowledge of content and materials of the six required courses - MSBD 502, MSBD 710, MSBD 720, MSBD 735, MSBD 551, MSDS 565.

MSBD 870 Literature Review. *Variable hours per semester may be offered (1–3 hours).* The course provides doctoral students with advanced research skills and strategies for conducting a literature review leading to a dissertation. Through this course, students will produce an extensive and integrative literature review related to their dissertation topic. Students will search, retrieve, summarize, and synthesize relevant studies to produce a comprehensive literature review.

MSBD 880 Proposal Manuscript and Defense. *Variable hours per semester may be offered (1–3 hours).* This course provides the student with the opportunity to concisely describe a biomedical data science research problem and methodology. Preparation and defense of the dissertation proposal which clearly articulates the problem to be investigated in the field of biomedical data science, literature review, and what would need to be done to complete the dissertation. Student must successfully defend the proposal before a Dissertation Committee which will determine whether the student proceeds to complete the dissertation.

MSBD 890 Dissertation and Defense. 12 credit hours. Pre-requisite(s): MSBD 880 Proposal Manuscript and Defense. *Variable hours may be offered.* The completion of Ph.D. dissertation is the culmination of the doctoral degree in this graduate program. The research topic of the dissertation must be related to the Ph.D. in Biomedical Data Science Ph.D. program.

MSBI 530 Mathematical Modeling for Bioinformatics. 3 credit hours. This course provides an in-depth exploration of the mathematical models and methods used to analyze and interpret biological data in bioinformatics. Students will learn to apply mathematical concepts such as probability theory, statistical inference, and dynamic systems to model complex biological processes, including gene regulation, metabolic networks, and population dynamics. The course emphasizes the development of quantitative skills necessary for building and analyzing models that can predict and elucidate biological behavior. Through a combination of theoretical instruction and practical exercises, students will gain the ability to construct and validate models that address key questions in genomics, proteomics, and systems biology. This course is essential for those seeking to understand the mathematical underpinnings of bioinformatics and to contribute to the development of innovative computational tools and approaches.

MSBI 555 Computational Biomedicine and Drug Discovery. 3 credit hours. This course focuses on the application of computational methods to the drug discovery process, integrating principles of computational biomedicine with the challenges of identifying and developing new therapeutic agents. Students will explore key topics such as target identification, virtual screening, molecular docking, structure-based drug design, and the use of machine learning in predicting drug efficacy and safety. The course also covers systems pharmacology and the modeling of drug interactions within biological networks. Emphasis is placed on the practical application of computational tools in the pharmaceutical industry, including the use of high-throughput screening data and the optimization of lead compounds. Through a combination of theoretical instruction, hands-on projects, and case studies, students will gain the skills necessary to contribute to the development of new drugs and to advance innovations in personalized medicine.

MSBI 565 Computational Genomics. 3 credit hours. This course entails Fundamentals of Genomics, Sequencing Tools and Advanced technologies and developing advanced computational methods for the

application in Comparative Genomics, Genome wide association study, population genomics, clinical genomics, functional genomics, application of genomics in public health and personalized medicine, privacy, and security in genomic data analysis.

MSBI 585 Special Topics in Bioinformatics and Computational Biology. 3 credit hours. This course delves into emerging and advanced topics in bioinformatics and computational biology, offering students the opportunity to explore cutting-edge research and technologies in the field. Each offering of the course focuses on different specialized areas, which may include topics such as metagenomics, structural bioinformatics, systems biology, single-cell genomics, or computational approaches to precision medicine. Through a combination of lectures, seminars, and project-based learning, students will engage with current literature, develop critical thinking skills, and apply advanced computational techniques to solve complex biological problems. This course is designed to adapt to the rapidly evolving landscape of bioinformatics, providing students with the tools and knowledge to stay at the forefront of the discipline.

MSCA 525 Introduction to Cybersecurity. 3 credit hours. This course introduces the fundamental principles and practices of cybersecurity. It covers the key concepts, terminologies, and technologies essential for protecting information systems against various types of cyber threats. Students will be introduced to security policies, risk management, cryptography, and the importance of ethical considerations in cybersecurity.

MSCA 550 Digital Forensics and Ethical Hacking. 3 credit hours. This course provides an in-depth exploration of digital forensics and ethical hacking, equipping students with the knowledge and skills necessary to investigate and respond to cyber incidents. The course covers the legal and ethical implications of cybersecurity, techniques for collecting and analyzing digital evidence, and methods for identifying, exploiting, and mitigating vulnerabilities in computer systems.

MSCA 560 Distributed Systems and Network Security. 3 credit hours. This course explores the principles, technologies, and practices involved in securing distributed systems and networks. Students will learn about the security challenges inherent in distributed computing environments, including cloud computing, peer-to-peer networks, and large-scale networked systems. The course covers topics such as cryptography, access control, network security protocols, intrusion detection, and emerging threats in distributed systems.

MSCS 530 Principles of Programming Languages. 3 credit hours. This course explores the principles and concepts underlying programming languages. It provides a comprehensive understanding of language design, semantics, and implementation. Topics include syntax and semantics, type systems, language paradigms, and the practical aspects of programming language implementation. The course also covers recent trends and innovations in programming languages.

MSCS 540 Theoretical Foundations of Artificial Intelligence. 3 credit hours. This course delves into the theoretical underpinnings of machine learning. It covers foundational concepts, theoretical results, and proofs that inform modern machine learning algorithms. Students will explore learning theory, statistical learning theory, and algorithmic principles that form the basis for developing and analyzing machine learning models.

MSCS 565 Advanced Computer Systems. 3 credit hours. This course offers an in-depth exploration of modern computer systems, focusing on advanced topics in computer architecture, operating systems, networking, and quantum computing. The course begins with a review of foundational computer systems concepts and progresses to advanced pipelining, superscalar architectures, distributed computing, and system-level design. Students will engage with cutting-edge topics such as Software-Defined Networking (SDN), Network Functions Virtualization (NFV), and the principles and challenges of quantum computing. Through a combination of theoretical instruction and practical assignments, students will develop a

comprehensive understanding of advanced computer systems and their applications in real-world scenarios.

MSCS 580 Advanced Analysis of Algorithms. 3 credit hours. This course provides an in-depth exploration of advanced topics in algorithm analysis. Students will study a range of sophisticated techniques and their applications, focusing on both theoretical and practical aspects. Emphasis will be placed on problem-solving, algorithm design, and performance analysis, with topics drawn from current research and emerging trends in the field.

MSCS 575 High Performance Computing. 3 credit hours. This course provides a comprehensive introduction to High-Performance Computing (HPC) and its applications in various fields. Students will explore the fundamental concepts of HPC, including distributed and parallel computing, HPC architecture, and operating systems. The course covers key optimization techniques, libraries, and tools essential for developing and managing HPC systems. Additionally, students will gain insights into specialized topics such as System on Chip (SoC) design, neuromorphic computing, and CUDA programming. Through hands-on projects and practical exercises, students will learn to harness the power of HPC for solving complex computational problems.

MSDS 510 Computer Programming Foundations for Data Science. 3 credit hours. Pre-requisite(s): None. Introduction to computer programming for data science using Python, R, and SAS.

- Introduction to Python. Python syntax to write basic computer programs; Using the interpreter; Built-in and user-defined functions; Introduction to object-oriented programming in Python.
- Introduction to R. Simple graphing; R Basics: variables, strings, vectors; Data Structures: arrays, matrices, lists, dataframes; Programming Fundamentals: conditions and loops, functions, objects and classes, debugging.
- Introduction to SAS Programming. The SAS Operating Environment; SAS Programming Essentials: SAS Program Structure, SAS Program Syntax; Getting Data In and Out of SAS; Printing and Displaying Data; Introduction to SAS Graphics.

There are no pre-requisites for this course. Students are expected to have a working familiarity with the discipline of data science and analytics and general knowledge about the impacts of Big Data in businesses and corporations. All students should have a working knowledge of all aspects of Microsoft Office; and it goes without saying that they should be familiar with Internet access and usage.

MSDS 515 Data Conscientiousness. 3 credit hours. Pre-requisite(s): None. Using Excel, JavaScript, Python, SAS, SQL, and R to develop Data Conscientiousness: ability to immediately recognize the issues involved in data organization that will need to be addressed to tackle a specific problem. Developing skills in all of the preprocessing, scrubbing, cleaning tools ("search and rescue" operations), data imputation and handling of missing values, checking for adherence to data standards, and all of the rest of the time-consuming and dirty work of data projects. Linking structured and unstructured data sources and recognizing how to reshape data to get it into a computer-friendly format (i.e., rows and columns) required by analytical and statistical methods. A gentle introduction to statistics to enable understanding of the statistical difference between observations and variables, along with knowledge of the different scales of measurement so as not to end up with nonsensical analytical results. 3 credit hours, Spring & Summer. Pre-requisite(s): None. There are no pre-requisites for this course. Students are expected to have a working familiarity with the discipline of data science and analytics and general knowledge about the impacts of Big Data in businesses and corporations. All students should have a working knowledge of all aspects of Microsoft Office; and it goes without saying that they should be familiar with Internet access and usage.

MSDS 520 Mathematical & Statistical Foundations for Data Science. 3 credit hours. Pre-requisite(s): Undergraduate Calculus or Elementary Statistics. Techniques for building and interpreting mathematical models of real-world phenomena in and across multiple disciplines, including linear algebra, discrete

mathematics, probability, and calculus, with an emphasis on applications in data science and data engineering. Introduction to statistical methods that are used to solve data problems. Topics include sampling and experimental design, group comparisons, parametric statistical models, multivariate data visualization, multiple linear regression, and classification. Students will obtain hands on experience in implementing a range of commonly used statistical methods on numerous real-world datasets.

MSDS 525 Data Management Foundations for Data Science. 3 credit hours. Pre-requisite(s): MSDS 510, 515. The concepts and structures used to store, analyze, manage, and present (visualize) information and navigation using Python, SQL, SAS, and QGIS. Topics will include information analysis and organizational methods, and metadata concepts and applications. Students will be assisted to identify disparate data sources needed to perform analysis for a given real-world problem. Typically, data from a single source will not be adequate to perform the required analysis. Students will pull data from the disparate data sources and import it into SAS and use several SAS procedures to detect invalid data; format, validate, clean the data; and impute the data if it is missing. This will prepare the data for statistical analysis and decision modeling in SAS.

- Python Lists, Sets, Strings, Tuples, and Dictionaries; Reading and manipulating CSV files, and the Numpy library; Introduction to the abstraction of the Series, Pandas, and DataFrame as the central data structures for data analysis, along with tutorials on how to use functions such as Groupby, merge, and pivot tables effectively.
- Introduction to Databases and basic SQL; Using string patterns and ranges to search data and to sort and group data in result sets; Working with multiple tables in a relational database using join operations; Using Python to connect to databases and then create tables, load data, query data using SQL, and analyze data using Python.
- Introduction to Data Step in SAS; Processing Data in Groups; Manipulating Data with Functions; Data Extraction and Preparation, Concatenating, Merging and Interleaving Tables; Using SQL in SAS to query and join tables.
- Preparing comprehensive plans to manage spatial and non-spatial health-related data; building versioned enterprise databases; and knowing how to implement best practices for managing databases for health projects and organizations.

MSDS 530 Statistical Inference and Modeling. 3 credit hours. Pre- requisite(s): MSDS 510, (MSDS 520 or MSBD 520). Regression Models and Analysis of Variance (SAS, R). Confidence Interval; Parameter Estimation, Fitting Distributions; Testing Hypothesis, Goodness of Fit; Summarizing Data; Comparing Two Samples; ANOVA; Categorical Data; Least Squares Method.

MSDS 535 Further Mainstream Programming Languages for Data Science. 3 credit hours. Pre-requisite(s): MSDS 525. This course covers other useful mainstream programming languages for data science, beyond Python, R, SQL, and SAS. These “other” potential programming languages supplement the ability to crunch numbers and equip the data scientist with good all-round programming skills. Programming languages covered will vary depending on industry popularity. While some of the programming languages may not be covered in detail, examples include Java, Scala, Julia, MATLAB, JavaScript, TensorFlow, Go, Spark.

MSDS 545 Introduction to Computational Software Engineering. 3 credit hours. Pre- requisite(s): MSDS 525. Introduction to systems development for computational science. Design, develop, and deploy a set of software components to produce a scalable, reliable, and reproducible experimental system for scientific investigation; Use a variety of approaches to software development team organization, and select techniques that are appropriate in different circumstances.

MSDS 550 Computational Machine Learning. 3 credit hours. Pre-requisite(s): (MSDS 530 or MSBD 530), (MSDS 535 or MSBD 540). Introduction to machine learning with business applications. Survey of machine learning techniques, including traditional statistical methods, resampling techniques, model selection and regularization, tree-based methods, principal components analysis, cluster analysis, artificial neural networks,

and deep learning. Students implement machine learning models with open-source software for data science. They explore data and learn from data, finding underlying patterns useful for data reduction, feature analysis, prediction, and classification.

MSDS 555 Big Data Management and Analytics. 3 credit hours. Pre-requisite(s): MSDS 530, 535. (SAS, Python, SQL, MapReduce/Hadoop). An overview of modern data science: the practice of obtaining, storing, modeling, manipulating, analyzing, and interpreting data. Emerging Big data processing frameworks. NoSQL storage solutions. Memory resident databases and graph databases. Ability to initiate and design highly scalable systems that can accept, store, and analyze large volumes of unstructured data in batch mode and/or real time. Organization, administration, and governance of large volumes of both structured and unstructured data.

MSDS 560 Natural Language Processing. 3 credit hours. Pre-requisite(s): MSDS 550. (Python, SAS, R). A comprehensive review of text analytics and natural language processing with a focus on recent developments in computational linguistics and machine learning. Students work with unstructured and semi-structured text from online sources, document collections, and databases. Using methods of artificial intelligence and machine learning, students learn how to parse text into numeric vectors and to convert higher dimensional vectors into lower dimensional vectors for subsequent analysis and modeling. Applications include speech recognition, semantic processing, text classification, relevant search, recommendation systems, sentiment analysis, and topic modeling. This is a project-based course with extensive programming assignments.

MSDS 565 Predictive Modeling and Analytics. 3 credit hours. Pre-requisite(s): MSDS 550 or MSBD 550. Tools and techniques for building statistical or machine learning models to make predictions based on data. NLP and Text Analytics, Time Series, Experimentation and Optimization.

MSDS 570 Visualization and Unstructured Data Analysis. 3 credit hours. Pre-requisite(s): MSDS 520 or MSBD 520. Data visualization tools and technologies (including Python, SAS, R, or Tableau) essential to analyze massive disparate amounts of information and make data- driven decisions.

MSDS 575 Ethics in Data Science. 3 credit hours. Pre-requisite(s): MSDS 530 or MSBD 530. Analysis of ethical issues, algorithmic challenges, and policy decisions (and social implications of these decisions) that arise when addressing real-world problems through the lens of data science, and the choices we make at the different stages of the data analysis pipeline, from data collection and storage to understand feedback loops in analysis.

MSDS 580 Research Methods. 3 credit hours. Pre-requisite(s): MSDS 565, 575. The research process investigating information needs, creation, organization, flow, retrieval, and use. Stages include: research definition, question, objectives, data collection and management, data analysis and data interpretation. Techniques include: observation, interviews, questionnaires, and transaction-log analysis.

MSDS 590 Capstone. 3 credit hours. Pre-requisite(s): MSDS 580. Comprehensive real-life industry-type capstone, oriented toward the student's domain of interest. Projects will include: formulation of a question to be answered by the data; collection, cleaning and processing of data; choosing and applying a suitable model and/or analytic method to the problem; and communicating the results to a non- technical audience.

MSDS 610 Network and Graph Theory for Data Science. 3 credit hours. Networks are discrete mathematical objects that describe systems of entities with pairwise relationship. Over the past several decades, technological advances in data collection and extraction have fueled an explosion of data in the form of networks from seemingly all corners of science. This course aims at providing the mathematical foundations of networks with a particular emphasis on their applications in modern data science, using tools from algorithmic graph theory and linear algebra. The topics include basic graph theory, network statistics, search algorithms, community detection, duality theorems and applications. The course will utilize python (e.g.,

Networks and Jupyter Notebook) to implement and test the techniques in graph theory and network science in synthetic and real data. Students are strongly encouraged to have some familiarity in Python prior to taking this course.

MSDS 620 Signal Processing for Big Data. 3 credit hours. This course introduces fundamentals of signal processing along with its applications in wearable sensor devices. The course includes topics on signal acquisition, techniques on processing the signals captured, including time domain approaches for event detection, time-varying signal processing for understanding the dynamical aspects of complex systems, and finally the application of machine learning algorithms to build predictive models for early insights.

MSDS 655 AI in Cyber Security. 3 credit hours. What is artificial intelligence (AI)? What does it mean for cybersecurity? And how AI can be integrated to achieve the goals of cybersecurity? This course designed to answer the above questions. In this course, a mix of key AI technologies will be introduced to support the understanding of the decision-making process when cybersecurity is concerned. The course will address key AI technologies in an attempt to help in understanding their role in cybersecurity. AI deficiently will complement and strengthen the cybersecurity practices and will improve their applications in enhancing our security.

MSDS 700 Fundamentals of Database Management Systems. 3 credit hours. Introduction to database concepts and the relational database model. Topics include ER Model, Relational Model, Relational Algebra, SQL, normalization, Indexing, Normal Forms, design methodology, DBMS functions, Security, Transaction Management, data-base administration, and other database management approaches such as client/server databases, object-oriented databases, and data warehouses. Strong emphasis on database system design and application development.

MSDS 710 Mathematical and Statistical Theory. 3 credit hours. This course will cover fundamental mathematical background for statistical theories. Probability spaces as models for phenomena with statistical regularity. Discrete spaces (binomial, hypergeometric, Poisson). Continuous spaces (normal, exponential) and densities. Random variables, expectation, independence, conditional probability. The course will cover probabilities, multivariate distribution and special distribution, statistical inference, maximum likelihood methods, sufficiency, test of hypotheses, inference about normal methods, nonparametric statistics, Bayesian statistics.

MSDS 715 Data Modeling for Big Data. 3 credit hours. Principles, practices, and techniques for effective data modeling in the age of Big data.

MSDS 720 Advanced Statistics. 3 credit hours. Utilize current statistical techniques to assess and analyze biomedical and public health related data. Read and critique the use of such techniques in published research. Review of linear models, matrix algebra, and multiple analysis of variance. Introduction to random effects models, understanding and computing power for the GLM, GLM assumption diagnostics, transformations, polynomial regression, coding schemes for regression, multicollinearity. Determine what analytical approaches are appropriate under different research scenarios.

MSDS 725 Advanced Scientific Computing: Stochastic Methods for Data Analysis, Inference & Optimization. 3 credit hours. Study of Monte Carlo methods, a diverse class of algorithms that rely on repeated random sampling to compute the solution to problems whose solution space is too large to explore systematically or whose systemic behavior is too complex to model. Introduction to important principles of Monte Carlo techniques and their power. Bayesian analysis and Markov chain Monte Carlo samplers, slice sampling, multigrid Monte Carlo, Hamiltonian Monte Carlo, parallel tempering and multi-nested methods, and streaming methods such as particle filters/sequential Monte Carlo. Related topics in stochastic optimization and inference such as genetic algorithms, simulated annealing, probabilistic Gaussian models, and Gaussian processes. Applications to Bayesian inference and machine learning. Python or R for all programming assignments and projects.

MSDS 727 Digital Image Processing and Understanding. 3 credit hours. This course presents fundamental concepts and techniques in digital image processing and understanding. Both theoretical material and computing techniques are introduced. The analytical tools and methods which are currently used in digital image processing are introduced and applied to practical scenarios. Basic digital computing knowledge and programming skills are reinforced by solving real world problems. Computational studies may be performed in R or Python.

MSDS 730 Deep Learning. 3 credit hours. Deep learning is a sub-field of machine learning that focuses on learning complex, hierarchical feature representations from raw data. The dominant method for achieving this, artificial neural networks, has revolutionized the processing of data (e.g. images, videos, text, and audio) as well as decision making tasks (e.g. game-playing). Its success has enabled a tremendous amount of practical commercial applications and has had a significant impact on society. In this course, students will learn the fundamental principles, underlying mathematics, and implementation details of deep learning. This includes the concepts and methods used to optimize these highly parameterized models (gradient descent and backpropagation, and more generally computation graphs), the modules that make them up (linear, convolution, and pooling layers, activation functions, etc.), and common neural network architectures (convolutional neural networks, recurrent neural networks, etc.). Applications ranging from computer vision to natural language processing and decision-making (reinforcement learning) will be demonstrated. Through in-depth programming assignments, students will learn how to implement these fundamental building blocks as well as how to put them together using a popular deep learning library, PyTorch.

MSDS 736 Ethical, Legal & Societal Issues in Healthcare. 3 credit hours. Examination of case studies. Introduction to healthcare law and ethics, making ethical decisions, contracts, medical records and informed consent, privacy law and HIPAA.

MSDS 740 Big Data Privacy and Security. 3 credit hours. Security issues related to the safeguarding of sensitive personal and corporate information against inadvertent disclosure; Policy and societal questions concerning the value of security and privacy regulations, the real world effects of data breaches on individuals and businesses, and the balancing of interests among individuals, government, and enterprises; Current and proposed laws and regulations that govern information security and privacy; Private sector regulatory efforts and self-help measures; Emerging technologies that may affect security and privacy concerns; and Issues related to the development of enterprise data security programs, policies, and procedures that take into account the requirements of all relevant constituencies; e.g., technical, business, and legal.

MSDS 750 Individual Studies. Variable hours per semester may be offered (1–3 hours). This course provides students an opportunity to delve into a special study of interest related to data science selected by the student under the guidance of a faculty member. The student and faculty member meet weekly to discuss the studies; the student will be required to write a comprehensive review paper on the semester's studies.

MSDS 800 Candidacy Exam. 1 credit hour. Preparation for the Candidacy Exam intended to demonstrate advanced knowledge of content and materials of the six required classes.

MSDS 870 Literature Review. Variable hours per semester may be offered (1–3 hours). This course provides doctoral students with advanced research skills and strategies for conducting a literature review leading to a dissertation. Through this course, students will produce an extensive and integrative literature review related to their dissertation topic. Students will search, retrieve, summarize, and synthesize relevant studies to produce a comprehensive literature review.

MSDS 880 Seminar. Variable hours per semester may be offered (1–3 hours). This course provides the student with the opportunity to concisely describe a data science research problem and methodology.

Preparation and defense of the dissertation proposal which clearly articulates the problem to be investigated in the field of data science, literature review, and what would need to be done to complete the dissertation. Student must successfully defend the proposal before a Dissertation Proposal Committee which will determine whether the student proceeds to complete the dissertation.

MSDS 890 Dissertation and Defense. 12 credit hours, variable hours may be offered. The completion of Ph.D. dissertation is the culmination of the doctoral degree in this graduate program. The research topic of the dissertation must be related to the Ph.D. in Data Science program.

** For newer courses and programs not listed here, please see the program and course information listed on the school's website for recent news and updates: <https://sacsmeharry.org/>.

School of Applied Computational Sciences Faculty

Department of Biomedical Data Science

Professors

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3. Wallace, T.L.; Ph.D., Computer Info. Eng., Tennessee State University, USA

Assistant Professors

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5. Gary, Todd; Ph.D., Molecular Biology, Vanderbilt University, USA
6. Gill, Jappreet; Ph.D. Biomedical Engineering, University of North Dakota, Grand Forks, ND
7. Khairi, Nazirah Mohd; Ph.D. Electrical Engineering, Vanderbilt University, USA
8. Mamun, Abdullah; Ph.D. Computational Chemistry, University of Louisville, USA
9. Pinky, Lubna; Ph.D., Biophysics, Texas Christian University, USA
10. Saha, Shumit; Ph.D., Biomedical Engineering, University of Toronto, Canada
11. Singhal, Ashutosh; Ph.D., Central Drug Research Institute, Lucknow, India

Department of Computer Science & Data Science

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3. Mhlanga, Fortune; Ph.D., Computer Science, New Jersey Institute of Technology, USA

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5. Qian, Lei; Ph.D., Math. and Computer Science, Indiana University; Ph.D., Math., National University of Singapore

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10. Neupane, Subash; Ph.D., Computer Science, Mississippi State University, USA
11. Ramezani, Somayeh Bakhtiari, Ph.D., Computer Science, Mississippi State University, USA
12. Sattar, Naw Safrin; Ph.D. Computer Science, University of New Orleans, USA
13. West, Graham; Ph.D., Computational and Data Science, Middle Tennessee State University, USA