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Objectives of the MSM Medical Curriculum

Morehouse School of Medicine, a historically black institution established to recruit and train minority and other students as physicians, biomedical scientists, and public health professionals committed to the primary healthcare needs of the underserved, has a primary goal to provide an academic environment that acknowledges education as the primary function of the institution that supports and promotes lifelong learning as a foundation for excellence in clinical practice, biomedical science, and public health practice. A major objective of the undergraduate medical program is to graduate students who are competent, caring, effective healthcare practitioners.

The undergraduate medical program requires that candidates for the MD degree acquire certain knowledge, skills, and attitudes that are essential for functioning in a broad variety of clinical situations. To render a wide spectrum of primary care, a graduate must develop:

1. A mastery of the concepts necessary for the prevention, diagnosis, treatment, and management of common medical problems, specifically
 - a. knowledge of the normal development, structure and physiological function of the body, organ systems, tissues and cells, and their interrelationships
 - b. knowledge of the molecular, biochemical, cellular, and physiological mechanisms that are important in maintaining the body's homeostasis
 - c. knowledge of the biochemical, immunologic, pharmacologic, and microbiologic principles related to issues of disease, laboratory tests, and therapeutics
 - d. knowledge of the various etiologies (genetic, developmental, metabolic, toxic, iatrogenic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of diseases (pathogenesis), the associated altered structure and function (pathology and pathophysiology) and characteristic pathologic and laboratory manifestations
 - e. knowledge of common epidemiologic and risk factors for diseases and the role and impact of psychological, behavioral, social, economic, and cultural factors on health and disease
 - f. knowledge of the ethical, legal, and economic issues that impact health and medical care

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2. Basic skills, including the ability to
 - a. perform and record a complete and accurate history, sensitive to patient needs and the nature of the situation
 - b. perform and record an accurate and complete physical examination, sensitive to patient needs and the nature of the situation
 - c. develop an appropriate diagnostic and therapeutic plan, appropriately using information resources, laboratory and imaging testing
 - d. communicate (in writing and orally) effectively and respectfully with peers, faculty, colleagues, and other members of the healthcare team, understanding the role of consultations and referrals
 - e. communicate and interact with patients in an effective, respectful, and compassionate manner, including counseling them on risks, prevention, lifestyle and therapy issues
 - f. obtain, analyze, and use the medical literature and other information resources to address medical questions and to sustain professional growth
 - g. apply techniques of population health, including methods of analysis of the health and health problems of defined populations and development of interventions to improve the health of populations.

Throughout training, a candidate must demonstrate medical professionalism including ethical behavior, moral reasoning, honesty, integrity, dependability, and commitment to service.

Students who complete the undergraduate medical education program obtain an unqualified medical degree. The students must pass: 1) all courses in the undergraduate medical curriculum to acquire essential knowledge and develop skills needed for competent medical practice, and 2) two certifying medical licensure examinations (USMLE, Steps 1 and 2-CK and CS).

Medical education requires that the accumulation of scientific knowledge be accompanied by the simultaneous acquisition of skills and professional attitudes and behavior. Thus, in addition to academic requirements, technical standards have been established for admission and graduation from Morehouse School of Medicine. These standards are published in the student handbook and define aptitude, abilities and skills in the

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following areas: observation, communication, motor coordination of function, conceptual, intellectual-conceptual, integrative and quantitative abilities, behavioral and social attributes.

Due to the unique mission of the institution, particular effort is made to promote graduate education in primary care areas. In this regard, another objective of the undergraduate program is to have the majority of graduates choose residency training in primary care specialties. Through training sites in rural and inner city areas, students also discover the special needs of patients in those areas that are historically underserved with regard to physician care. Through achievement of these objectives, graduates of the MD program will be equipped to: 1) enter and complete programs of graduate medical education, 2) qualify for medical licensure, and 3) provide competent, sensitive medical care. In addition, they should have acquired the motivation and skills necessary for continued learning and for understanding the evolving primary healthcare needs of underserved patient populations.

Technical Standards for Medical School Admissions 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, and thus, admission to medical school has been offered to those who present the highest qualifications for the study and practice of medicine. Technical standards have been established as prerequisites for admission to and graduation from MSM. All courses in the curriculum are required in order to develop essential skills required to become a competent physician.

Graduates of medical school must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. Morehouse School of Medicine acknowledges Section 504 of the 1973 Vocational Rehabilitation Act and PL 101-336, the Americans with Disabilities Act (ADA), but ascertains that certain minimum technical standards must be present in the prospective candidates.

A candidate for the MD degree must have aptitude, abilities, and skills in five areas: 1) observation, 2) communication, 3) motor, 4) conceptual, integrative and quantitative, and 5) behavior and social. Technological compensation can be made for some handicaps in these areas, but a candidate should be able to perform in a reasonably independent manner.

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- Observation necessitates the functional use of the sense of vision and other sensory modalities. The candidate must be able to observe demonstrations and participate in experiments in the basic sciences. The candidate must also be able to observe a patient accurately at a distance and close at hand.
- Communication includes not only speech, but reading and writing. A candidate must be able to communicate effectively and sensitively with patients and all members of the healthcare team.
- Candidates should have sufficient motor functions to elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers. A candidate should be able to do basic laboratory tests, carry out diagnostic procedures, and read EKGs and X-rays. A candidate should be able to execute motor movements reasonably required to provide general care and emergency treatment to patients. Such actions require coordination of both gross and fine muscular movements, equilibrium and functional use of the senses of touch and vision.
- Intellectual, integrative and quantitative abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving, the critical skill demanded of physicians, requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relations and to understand the spatial relationships of structures.
- Candidates must possess the behavioral and social attributes required for full use of their intellectual abilities. The exercise of good judgment, prompt completion of all responsibilities attendant to the diagnosis and care of patients, and the development of mature, sensitive, and effective relationships with patients are important. 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. (Adopted from the College of Medicine at the University of South Florida Technical Standards.)

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Curriculum

The educational program offered by Morehouse School of Medicine which leads to the Doctor of Medicine (MD) degree, focuses both on scientific medicine and on meeting the primary healthcare needs of patients who are underserved. Most of the first and second-year classes are offered in the Hugh Gloster Basic Medical Sciences Building on the main campus. Clinical experience begins in the first-year with clinical preceptorships in private offices. Clinical experience is continued in a state-of-the-art clinical skills training lab located in the National Center for Primary Care located on the main campus. Learning through community service is also an element of the first-year curriculum. In addition, clinical preceptorships in health clinics and physicians' offices are part of the educational program. The entire first-year curriculum extends over ten and one-half months.

Students may elect to participate in the five year program or may be directed to do so on the basis of performance. This decelerated curriculum allows three years to complete the first two years of the basic sciences curriculum. The second-year of the curriculum begins in mid-August and concludes with the United States Medical Licensing Examination, Step 1 (USMLE, Step 1). The ten-month curriculum includes course work in clinical medicine taught in affiliated hospitals and clinics.

The academic schedule for the third year begins in early August and ends in late July. During this twelve-month period, students must complete all of the following clerkships: Surgery, Family Medicine, Psychiatry, Internal Medicine, Pediatrics, Obstetrics and Gynecology, and Fundamentals of Medicine 3.

The academic schedule for the fourth year begins in early August and ends in late April. During this nine-month period, students must complete the remaining two required courses, i.e., Rural Primary Care and Ambulatory Medicine, in addition to a minimum of five clinical electives. The electives program, which must be approved for each student in order to ensure a balanced program, may include electives at other LCME accredited medical schools.

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MEDI 531 Organ Systems 1 (10 Credit hours)

Building on the content of basic principles, this course presents an integrated introduction to structure and function of the organ systems. This course includes musculoskeletal (with emphasis on back and upper extremity), cardiovascular, respiratory, and gastrointestinal systems, including histology, embryology, gross anatomy, and physiology. Instructional methods include lecture, gross lab, demonstrations, problem sessions, case-based, and self-directed study. September- December, Course Director: Lawrence Wineski, Ph.D. Prerequisite—Completion of MEDI 530. (letter grade)

MEDI 532 Organ Systems 2 (10 Credit hours)

Building on the content of Organ Systems 1, this course continues instruction in histology, embryology, physiology and gross anatomy of the organ systems, continuing with renal, endocrine, gonadal/pelvic (with lower extremity), hematologic and other systems. Instructional methods include lecture, gross lab, demonstrations, problem sessions, case-based and self-directed study. January-March. Course Director: Adel Elmoselhi, MBChB, Ph.D. Prerequisite—completion of MEDI 531. (letter grade)

MEDI 533 Organ Systems 3 (10 Credit hours)

This course completes the first year Organ systems sequence with head, neck and nervous systems. The basic anatomy and physiology of the central nervous system are integrated in this course. The major portion of the course is organized by systems, i.e., sensory (e.g., visual, auditory), motor, limbic and autonomic. In the laboratory, gross and microscopic sections of the brain and spinal cord are studied and head and neck are dissected. March-May. Course Director: John W. Patrickson, PhD Prerequisite—completion of MEDI 532. (letter grade)

MEDI 509 Community Health (4 credit hours)

This unique, community-based course minimizes lectures, relying primarily on a format of assigning students to small interdisciplinary groups that pursue health promotion activities in inner city communities in Atlanta. In the fall semester, students analyze the health problems of their designated community, and develop and present policy recommendations to local and state elected officials and community activists. In the spring, students develop health promotion interventions to address the community needs previously identified. Course Director: Meryl S. McNeal, PhD (September–May) (letter grade)

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Second-Year Curriculum

Course	Semester Credit Hours
Pathophysiology	7.0
*Nutrition	1.0
Microbiology and Immunology	7.0
Pharmacology and Toxicology	7.0
Pathology	12.0
Fundamentals of Medicine 2	<u>8.0</u>
Total Credit Hours=	42.0

*Pass/Fail Course

Second-Year Course Descriptions

MEDI 600 Pathophysiology (7 credit hours)

This is a two-semester course designed not only to cover the pathophysiological mechanisms of disease, but also to develop the students' clinical reasoning abilities. It is intended to be a year-long board review and, as such, integrates the basic sciences with clinical topics. The course is taught in case-based format where student participation and initiative are crucial to success. Student evaluation is based on performance on board-type multiple choice examinations and class participation. Course Director: Janice Herbert-Carter, MD (October-May) (letter grade)

MEDI 601 Nutrition (1 credit hour)

This course is designed to increase student understanding of the basic nutritional principles needed for general patient care. Course content includes: nutritional assessment and support; diet and disease trends; nutritional disorders. Course Director: Marjorie Smith, MD (August-December) (Pass-fail)

MEDI 602 Medical Microbiology and Immunology (7 credit hours)

This course covers all of the agents of infectious diseases, the nature of the infections they cause, host responses and the natural and clinical defenses against infectious diseases. The goal of this course is to provide the student sufficient conceptual and practical knowledge of Medical Microbiology and Immunology to enter clinical training or preparation for more advanced study of infectious diseases. Prerequisite: Satisfactory completion of the first-year undergraduate medical education curriculum. Course Director: Michael Powell, PhD (August-May) (letter grade)

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MEDI 611 Fundamentals of Medicine 2 (7 credit hours)

This course includes Introduction to Patient Care (IPC), Physical Diagnosis, Human Values 2, and Psychopathology components. This course builds on the understanding of the doctor-patient relationship and interviewing skills. Large group meetings are held in the Fall for discussion, demonstration, and practice of the physical examination. For the remainder of the year, students are divided into small groups under the direction of the clinical faculty for the study of medical history-taking, physical examination, and the oral and written patient presentation. Individual patient assignments on the medical wards are supplemented by small group sessions. Course Director: Martha Elks, MD, PhD; Pediatrics director, David Levine, MD; Gynecology director, Djana Harp, MD (August-May) (letter grade)

Human Values 2 Component

Human Values II builds on Human Values I in presentations, discussions and group presentations, with an emphasis on cultural competence, cultural appreciation, domestic and other violence, and personal and family impacts of death. Course Director: Martha Elks, MD, PhD

Psychopathology Component

Students are introduced to techniques of psychiatric and psychological assessment, to the most common psychiatric disorders and emergencies, to crisis intervention, and to psychopharmacology. A survey of the relationship of psychiatry and the applied behavioral sciences of other disciplines and specialties is provided. Medical students should become sensitized to a variety of social and cultural problems infringing on patients and physicians in receiving and delivering healthcare services, such as sexual dysfunctions, substance abuse, sexism, racism, and poverty. Prerequisite: Satisfactory completion of Fundamentals of Medicine I. Course Sequence Director: Quentin Ted Smith, MD (January-March)

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obstetrical patients. They are actively involved with the diagnosis and treatment of minor and major gynecological problems in the outpatient department and on the hospital wards. Students are also exposed to the different obstetrical and gynecological subspecialties, including maternal fetal medicine, oncology, reproductive endocrinology and infertility. Course Director: Hedi Feng, MD (July-July) (letter grade)

MEDI 703 Third Year Clerkship in Pediatrics (10 credit hours)

Oriented to Primary Care Pediatrics in medically underserved settings, this required clerkship features a three-week ambulatory placement in a community private practice, Kaiser Office, or a neighborhood health center. The inpatient section of the course includes a two-week rotation at Children's Healthcare of Atlanta at Hughes Spalding Hospital and a one-week service at the term nursery of Gwinnett. Finally, there are two community/subspecialty weeks where students spend time in either subspecialty offices or clinics. There are also three half-days weekly for case discussions, computer based clinical simulations, and other classroom activities. The clerkship is largely based on a national curriculum developed by the Council on Medical Student Education in Pediatrics and the Ambulatory Pediatrics Association. Clerkship Director: David A. Levine, MD (July-July) (letter grade)

MEDI 704 Third Year Clerkship in Psychiatry (9 credit hours)

This is a seven-week rotation during the third year. Emphasis is on the clinical application of principles of psychiatry and aberrant behavior learned in the first two years. Students are assigned rotations at Ridgeview Institute, a psychiatric service facility; Atlanta Medical Center, an in/outpatient hospital; Georgia Regional Hospital/Atlanta, a public psychiatric facility; and Peachford Behavioral Healthcare System, a psychiatric and addictive disease treatment inpatient hospital. Atlanta Medical and Georgia Regional Hospital offer a broad spectrum of psychiatric disorders in both inpatient and outpatient settings. Clinical responsibilities include performing admission histories and psychiatric examinations, formulating psychodynamic aspects of the case, psychiatric differential diagnosis and actively participating in the psychotherapeutic and psychopharmacologic treatment and management of patients. Students attend and participate in rounds and ward teaching conferences. Students also participate in group therapy to gain further insight into the psychiatric problems of patients and their families. A clinical case teaching conference is held weekly with an attending physician to demonstrate interview techniques,

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centers, and South Fulton Medical Center, where students serve as sub-interns. Providing healthcare for senior citizens, adolescents, and obstetrical patients is strongly emphasized. Course Director: Riba Kelsey-Harris, MD (July–July) (letter grade)

MEDI 711 Fundamentals of Medicine 3 (2 credit hours)

This is a year long inter-disciplinary/multi-disciplinary seminar course that meets weekly across the third year. This course continues the multi-disciplinary, multi-theme and interactive approach of Fundamentals of Medicine 1 and 2. All third-year students participate in this year-long sequence of weekly two hour sessions covering a variety of topics. Among the areas covered are the health care system, diagnostic imaging, medical decision making and evidence-based medicine, professionalism and ethics, subspecialty areas, applied basic sciences, rehabilitation and career planning, exam preparation, and related topics. Instruction is by case discussion, lecture, in-class exercises, demonstrations, clinico-pathologic conference, presentations, skills sessions, focused assignments and selected readings. The course addresses inter-disciplinary and subspecialty topics that are key in the practice of medicine, but not otherwise covered in other clerkships. Course Directors: Martha Elks, MD, PhD and David Levine, MD (July–July) (letter grade)

Fourth-Year Curriculum

Required Clerkships	Semester Credit Hours
Ambulatory Medicine	5.0 (4 weeks)
Rural Primary Care	5.0 (4 weeks)
*Elective Rotations	<u>25.0</u> (28 weeks)
Total Credit Hours =	35.0

*Pass/Fail Course

Fourth-Year Course Descriptions

MEDI 801 Rural Primary Care (5 credit hours)

This ambulatory training experience focuses on common primary healthcare problems in non-urban settings. The goal of this course is to introduce students to the comprehensive primary care of rural populations and the analysis of rural health problems. Additionally, students are required to complete a special

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Course directors provide grading policies for their courses at the beginning of each course. These policies allow students to understand how grades are calculated and to evaluate their academic standing at any time. Grades may be based on performance on written or oral examinations, standardized testing, papers, presentations, faculty evaluation, attendance and other factors. Non-cognitive performance, including maturity, demeanor, cooperation, responsibility, ethics, and similar attributes are also factors in the assessment of performance. For each required course and clerkship, students will be expected, as a professional duty, to provide feedback regarding their experiences and perceptions about the content covered, methods of presentation, and the effectiveness of presentations. Departments and course directors in cooperation with the Student Academic Progress and Promotion Committee set criteria for remediation and/or repeat of failed courses.

Class Attendance and Examination Policy

Class attendance rules are established by individual course directors or instructors; however, class attendance is expected. Attendance throughout the clinical clerkships and other clinical experiences involving patient care is required. Excessive absences will result in incomplete or no credit for clinical experiences. Laboratory assignments are usually cooperative endeavors, thus absenteeism of one student is an imposition on others. If excessive, such absenteeism is regarded as a serious breach of conduct.

Attendance is required for some specific sessions and courses. Attendance is mandatory for tests and final exams. Excused absence from an examination must be obtained from the Vice Dean and Associate Vice President for Academic and Student Affairs prior to the examination or upon documentation of illness or other emergency taking place at the time of the examination. An unexcused absence from an examination will constitute a failure on the examination. Whether an absence is excused is determined only by consultation of the course director with the Vice Dean and Associate Vice President for Academic and Student Affairs. Examinations to make-up a deficiency due to an excused absence can be scheduled only in the week following final examinations.

Student promotion from one year to the next, recommendations for repeat of courses, or recommendations of dismissal are based upon academic performance in courses as well as upon evaluation of professional attitude and judgment, emotional health, fiscal responsibility, character and professional ethics, as determined by the Student Academic Progress and Promotions Committee of