

# MD PROGRAM

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## General Information

<https://med.miami.edu/medical-education/medical-programs>

The University of Miami Miller School of Medicine is committed to creating physicians who are empowered to transform lives and inspired to serve our global community. Our program is thoughtfully crafted to provide students with the comprehensive knowledge, skills, and experiences needed to succeed and become transformational leaders in the vibrant and constantly advancing field of health care.

### Accreditation

The Liaison Committee on Medical Education (LCME) is the official accrediting body for medical education programs leading to the MD degree in the United States and Canada. It is recognized by the U.S. Department of Education and the World Federation for Medical Education (WFME). The Miller School of Medicine is fully accredited by the LCME.

## Curriculum Requirements

The NextGenMD curriculum is divided into 3 phases. Phase 1 is the pre-clerkship curriculum, Phase 2 is the clerkship curriculum, and Phase 3 is the advanced post-clerkship curriculum.

### Phase 1

**Phase 1** provides a grounding in foundational and clinical science, health systems science, social determinants of health, core clinical skills, and professionalism. Phase 1 is completed over 14 months, inclusive of 2 months of summer capstone work. Phase 1 includes the **Introduction to the Medical Profession (IMP)** course, which includes a series of online modules and readings to prepare for in-person instruction and two weeks of an in-person introduction to the basic clinical skills, foundational principles, and professional behaviors relevant to the medical student. **Biomedical Principles of Health (BMPH)** is a multidisciplinary 9-week course which provides an overview of key concepts in genetics, cell physiology, pharmacology, autonomic nervous system, pathology, microbiology, and immunology. BMPH provides a foundation of basic science understanding supporting the organ system physiology and pathophysiology courses which follow. There are five **Symptoms and Signs of Disease (SSD) courses**, each focusing on two or more complementary disciplines in organ system anatomy and physiology, pathophysiology, and disease.

SSD1 Disciplines: Hematology and Cardiovascular

SSD2 Disciplines: Respiratory and Renal

SSD3 Disciplines: Gastroenterology/Hepatology/Nutrition and Rheumatology

SSD4 Disciplines: Neurology and Psychiatry

SSD5 Disciplines: Endocrinology, Reproductive Medicine, ENT/Dermatology

There are three **Medicine as a Profession (MAP) courses** in Phase 1 which focus on basic clinical skills, communication skills, professionalism, and qualities expected in a physician. The two **Scholarly Concentration courses** provide opportunities to pursue a dual degree or a scholarly pathway of emphasis. The pathways represent topics important to medicine from the humanities to basic sciences. Students can elect to follow their interests, gain knowledge, and participate in mentored scholarly and research activities. Phase 1 also includes three Milepost weeks that allow students to meet with longitudinal clinical educators, undergo clinical skills assessments, and take customized or comprehensive NBME exams.

### Phase 2

Phase 2 consists of clinical clerkships, where continued themes of foundational and clinical sciences are embedded within clerkships. Phase 2 is completed over 12 months and begins with an introductory "Transition to the Clerkships" course that covers core content areas: defining the medical student role, basic procedural skills, basic documentation skills, self-directed learning techniques, and how to be an effective learner in the clinical setting. Additionally, the course covers content reinforced throughout the phase including patient safety, leadership and health advocacy, wellness promotion, and quality improvement.

Phase 2 is divided into six clerkships as follows:

1. Practice of Medicine (inpatient/outpatient Internal Medicine and its subspecialties, Family Medicine, and Palliative Care) - 12 weeks.
2. ER to OR (Surgery, Anesthesia, Emergency Medicine) - 12 weeks.
3. Obstetrics/Gynecology - 6 weeks.
4. Pediatrics - 6 weeks.

5. Neurology (including Ophthalmology and Physical Medicine/Rehabilitation) - 6 weeks.
6. Psychiatry - 6 weeks.

During each clerkship block, foundational science and longitudinal thematic content is delivered using multiple modalities including online learning and interactive small group sessions. The foundational science content includes Anatomy/Cell Biology, Biochemistry, Microbiology/Immunology, Pharmacology, and Physiology; the longitudinal thematic content includes Oncology, Genetics, Radiology, and Pathology.

**Medicine as a Profession courses** (MAP 201, 202 and 203) are delivered longitudinally at pre-determined sessions during the clinical clerkships and during two Milepost weeks.

**At the end of Phase 2**, students are provided dedicated time to prepare for and take USMLE Steps 1 and 2CK.

### Phase 3

**Phase 3** occurs over 17 months and is dedicated to career exploration, integrated science selectives, advanced clinical experiences, electives, a critical care experience, a sub-internship, and preparation for internship. Phase 3 also allows all students to work on their scholarly concentration. All students must select a **Pathway of Emphasis** for their scholarly work or obtain a **dual degree** from existing 4-8-year dual degrees program options. A select group of students who meet defined competencies can enter residency early after 3 years. Students have opportunities to explore their interests through a variety of elective experiences both at the University of Miami and other accredited medical schools. Below are the required courses in Phase 3.

- 1) **Sub-Internship:** The sub-internship (sub-I) experience offered during Phase 3 is intended to provide a learning experience for the students that prepares them to serve as competent interns and effective members of an interdisciplinary team. The sub-internship is a 4-week inpatient experience.
- 2) **Advanced Integrated Science Selective:** Phase 3 students are required to choose one selective (4 weeks duration) from a variety of integrated science options that explicitly translate foundational science to clinical practice and allow students to reinforce important foundational science concepts taught in Phase 1 and 2. These selectives emphasize interactive teaching methods and explore basic science topics that are related to students' career choices or academic interests. This is a 4-week experience.
- 3) **Advanced Clinical Experience (ACE):** The student will be given the opportunity to exercise critical clinical thinking and patient care skills (e.g., diagnosis, prognosis, and management) while under the direct supervision of attending physicians and residents/fellows. Students follow the care of assigned patients with the attending physician. The students must be able to work up and manage the medical or surgical care of selected patients under the supervision of residents and attending physicians. This may include both outpatient and inpatient experiences and is 4 weeks in duration.
- 4) **Elective:** These courses are similar to ACE courses but are 2 weeks in length and more formative and experiential in nature. Students must complete 18 weeks (about 4 months) of ACE or elective courses.
- 5) **Critical Care Selective:** All students are required to complete a 2-week rotation in a critical care setting of their choice to become comfortable with the basic tenets of the care of acutely ill patients.
- 6) **Transition to Residency:** In the final semester of Phase 3, all students take a longitudinal didactic and experiential course to review content necessary for becoming an effective intern, with generic content for all senior medical students as well as specialty-specific course content. The course culminates in a 4-week in person experience at the end of the final semester of Phase 3.
- 7) **Medicine as a Profession (301 and 302):** In Phase 3, the MAP courses provide content specific to preparation for residency application and one-to-one meetings with longitudinal clinical educators to receive individualized guidance on the application process.

The **Scholarly Concentration** houses formalized research pathways and the Dual and Joint degree programs. Each student is required to either complete a second degree or participate in a pathway program, culminating in a capstone research project. The goal is to create well-rounded, transformational leaders in academic medicine through a formalized program of topical study paralleling every medical student's clinical training. Every student will learn the basics in practical applications of population health and gain a fundamental understanding of research methodology. There are several pathways and dual degree programs available to student. The Scholarly Concentrations research project culminates in the generation of a scholarly concentration portfolio comprising a written report and a public poster presentation in the final Spring semester.

Students enrolled in a dual or joint degree program must complete the MD curriculum and that of their second degree for graduation and therefore are not required to participate in a Pathway. These degree programs generally require at least 30 credits, including 3-6 credits for research; such activities thus fulfill the requirements for scholarly concentration work required of students enrolled in Pathways of Emphasis. Research training and mentorship in NextGenMD are part of the formalized curriculum to both alleviate pressure on students as well as improving the quality of their research education.

Students in the three-year **Accelerated Pathway to Residency** (described below) participate in the same courses and have the same core credit requirements in Phases 1 and 2, but their schedule and credit requirements differ in Phase 3 of the curriculum as they have five months to complete their curriculum rather than 17 months. The table below shows the courses and credit hours for the 4-year MD course and the 3-year accelerated pathway.

## MD Curriculum Requirements

Code	Title	Credit Hours
<b>Phase 1: Pre-Clerkship Required Courses</b>		
MDR 550	Introduction to the Medical Profession	3
MDR 526	Biomedical Principles of Health	10
MDR 520	Symptoms, Signs, and Disease 1	5
MDR 521	Symptoms, Signs, and Disease 2	5
MDR 522	Symptoms, Signs, and Disease 3	5
MDR 523	Symptoms, Signs, and Disease 4	7
MDR 524	Symptoms, Signs, and Disease 5	5
MDR 531	Medicine as a Profession 101	4
MDR 532	Medicine as a Profession 102	4
MDR 533	Medicine as a Profession 103	1
MDR 535	Introduction to Scholarly Concentration	2
MDR 536	Scholarly Concentration I	1
<b>Phase 2: Required Clerkships</b>		
MDR 702	Transition to Clinical Rotations	1
MDR 708	Obstetrics and Gynecology Clerkship	6
MDR 709	Pediatrics Clerkship	6
MDR 710	Psychiatry Clerkship	6
MDR 716	From the Emergency Department to the Operating Room Clerkship	12
MDR 717	Practice of Medicine Clerkship	12
MDR 757	Neurology Clerkship	6
MDR 720	Medicine as a Profession 201	1
MDR 721	Medicine as a Profession 202	2
MDR 722	Medicine as a Profession 203	1
<b>Phase 3: Advanced Course Requirements</b>		
Advanced Clinical Experience (ACE) or Electives		18
Sub-Internship (Sub-I)		4
Integrated Science Selective		4
MDR 1019	Senior Boot Camp: Transition to Residency	4
MDR 1036	Medicine as a Profession 301	1
MDR 1037	Medicine as a Profession 302	1
MDR 1038	Scholarly Concentration II	3
Critical Care Selective		2
<b>Total Credit Hours</b>		<b>142</b>

## Accelerated Pathway Requirements

Code	Title	Credit Hours
<b>Phase 1: Pre-Clerkship Required Courses</b>		
MDR 550	Introduction to the Medical Profession	3
MDR 526	Biomedical Principles of Health	10
MDR 520	Symptoms, Signs, and Disease 1	5
MDR 521	Symptoms, Signs, and Disease 2	5
MDR 522	Symptoms, Signs, and Disease 3	5
MDR 523	Symptoms, Signs, and Disease 4	7
MDR 524	Symptoms, Signs, and Disease 5	5
MDR 531	Medicine as a Profession 101	4
MDR 532	Medicine as a Profession 102	4
MDR 533	Medicine as a Profession 103	1
MDR 535	Introduction to Scholarly Concentration	2
MDR 537	Accelerated Scholarly Concentration I	8

<b>Phase 2: Required Clerkships</b>		
MDR 702	Transition to Clinical Rotations	1
MDR 708	Obstetrics and Gynecology Clerkship	6
MDR 709	Pediatrics Clerkship	6
MDR 710	Psychiatry Clerkship	6
MDR 716	From the Emergency Department to the Operating Room Clerkship	12
MDR 717	Practice of Medicine Clerkship	12
MDR 757	Neurology Clerkship	6
MDR 720	Medicine as a Profession 201	1
MDR 721	Medicine as a Profession 202	2
MDR 722	Medicine as a Profession 203	1
<b>Phase 3: Advanced Course Requirements</b>		
Advanced Clinical Experience (ACE), Electives, Integrative Science Selective, Critical Care Selective		10
Sub-Internship (Sub-I)		4
MDR 1019	Senior Boot Camp: Transition to Residency	4
MDR 1036	Medicine as a Profession 301	1
<b>Total Credit Hours</b>		<b>131</b>

## MD Required Curriculum for Dual/Joint Degree Programs

Code	Title	Credit Hours
<b>Phase 1: Pre-Clerkship Required Courses</b>		
MDR 550	Introduction to the Medical Profession	3
MDR 526	Biomedical Principles of Health	10
MDR 520	Symptoms, Signs, and Disease 1	5
MDR 521	Symptoms, Signs, and Disease 2	5
MDR 522	Symptoms, Signs, and Disease 3	5
MDR 523	Symptoms, Signs, and Disease 4	7
MDR 524	Symptoms, Signs, and Disease 5	5
MDR 531	Medicine as a Profession 101	4
MDR 532	Medicine as a Profession 102	4
MDR 533	Medicine as a Profession 103	1
<b>Phase 2: Required Clerkships</b>		
MDR 702	Transition to Clinical Rotations	1
MDR 708	Obstetrics and Gynecology Clerkship	6
MDR 709	Pediatrics Clerkship	6
MDR 710	Psychiatry Clerkship	6
MDR 716	From the Emergency Department to the Operating Room Clerkship	12
MDR 717	Practice of Medicine Clerkship	12
MDR 757	Neurology Clerkship	6
MDR 720	Medicine as a Profession 201	1
MDR 721	Medicine as a Profession 202	2
MDR 722	Medicine as a Profession 203	1
<b>Phase 3: Advanced Course Requirements</b>		
Advanced Clinical Experience (ACE) or Electives		18
Sub-Internship (Sub-I)		4
Integrated Science Selective		4
MDR 1019	Senior Boot Camp: Transition to Residency	4
Critical Care Selective		2
MDR 1036	Medicine as a Profession 301	1
MDR 1037	Medicine as a Profession 302	1
<b>Total Credit Hours</b>		<b>136</b>

*Note 1: For Accelerated Pathway, a total of 10 credits is required between Integrated Science Selective, Critical Care, and Electives at the discretion of the specific residency program.*

*Note 2: Dual/joint degree students do not get the 6 credits of Scholarly Concentration since they are getting distinct credits from a second degree, so their credit total is 136.*

*Note 3: MDR 1003 is a required 2-credit Elective for all MD/MPH students.*

## Plan of Study

### Mission and Goal

The NextGenMD curriculum strives to empower learners to transform lives and inspire learners to serve the global community. The curriculum will produce transformational leaders who will shape the future of medicine, direct health systems, and champion discovery and its translation into clinical interventions.

### Student Learning Outcomes

**Outcome 1:** Students will demonstrate a mastery of biomedical knowledge (e.g., anatomy, biochemistry, immunology, etc.) required to enter residency training.

**Outcome 2:** Students will demonstrate a mastery of clinical skills.

**Outcome 3:** Students will demonstrate application of knowledge and skills to clinical decision-making and the practice of medicine, including organizing clinical data, formulating differential diagnoses, synthesizing clinical information, and creating diagnostic and therapeutic plans.