



MEMORANDUM

To: Julio Frenk
University President

From: Linda L. Neider
Chair, Faculty Senate

Date: February 21, 2020

Subject: Faculty Senate Legislation #2019-59(B) – Restructuring the Doctor of Medicine (MD) Curriculum as Part of NextGenMD – Miller School of Medicine

The Faculty Senate, at its February 19, 2020 meeting, voted by majority with one no, and 2 abstentions, to approve the Miller school of Medicine’s restructuring of the MD curriculum. The NextGenMD is divided into 3 phases and this curriculum change will encompass phase 1 and phase 2.

This was approved with the proviso that the proponents report to the Senate before phase three is finalized, but no longer than a year, to give an outline of the plans for phase three.

The proposal is enclosed for your reference.


This legislation is now forwarded to you for your action.

LLN/ss/rh

cc: Jeffrey Duerk, Executive Vice President and Provost
Henri Ford, Dean, Miller School of Medicine
Alex Mechaber, Bernard J. Fogel Chair in Medical Education, Miller School of Medicine
Laurence Gardner, Executive Dean, Education and Policy, Miller School of Medicine

CAPSULE: Faculty Senate Legislation #2019-59(B) – Restructuring the Doctor of Medicine (MD) Curriculum as Part of NextGenMD – Miller School of Medicine

PRESIDENT'S RESPONSE

APPROVED:  DATE: 3/10/20
(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: Henri Ford, Dean, Miller School of Medicine

EFFECTIVE DATE OF LEGISLATION: IMMEDIATELY
(if other than June 1 next following)

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED): _____

Program Change Request

Date Submitted: 02/03/20 2:21 pm

Viewing: **MDDR_MD : MD Program**

Last edit: 02/03/20 2:58 pm

Changes proposed by: Alex Mechaber (amechabe)

Catalog Pages Using
this Program
[MD Program](#)

In Workflow

1. PG Assessment and Accreditation
2. PG FS Office for GWC
3. PG FS GWC
4. PG Faculty Senate
5. PG FS Office for President
6. PG Registrar

Approval Path

1. 02/03/20 3:00 pm
Patty Murphy
(pxm491): Approved
for PG Assessment
and Accreditation

Please list the authors of this proposal including name, rank/title, program/department, and school.

Proposer(s) Name

Alex J. Mechaber, MD, FACP
 Bernard J. Fogel Chair in Medical Education
 Senior Associate Dean for Undergraduate Medical Education
 Professor of Medicine
 Office of Medical Education
 University of Miami Leonard M. Miller School of Medicine

Change Type All Other Changes

Provide a brief
summary of the
change

We are proposing a restructuring of the MD curriculum as part of the new NextGenMD curriculum starting with new students entering in Fall of 2020.

Career Medicine (MD)

Academic Structure

	School/ College	Department
	Miller School of Medicine	Medicine
Plan Type	Major and/or Degree	
Degree Type	Doctorate	
Degree Name	Doctor of Medicine	
Proposed Plan Code		
Plan Name	MD Program	
Will there be any subcomponents within the program such as concentrations, specializations, thesis/non-thesis options, or tracks?		
No		
Effective Term	Fall 2020	
First Term Valid	Fall 2020	
Program Instruction Mode	In Person	
Where is the program offered?	Location	Please provide the % of instruction at each location.
	Medical Campus	100
Program Length (Years)	4	
Total Credits	144 149	

To Be Published in the Academic Bulletin

Program Overview

General Information

The University of Miami Miller School of Medicine enrolls approximately 198 students each year. One-hundred and fifty will be in the MD program and 48 in the 4-year, combined degree, MD-MPH Program. It has been a long-standing policy of the School of Medicine to admit students with diverse backgrounds. Therefore, qualified non-traditional students, women, socio-economically disadvantaged students, and minorities underrepresented in

medicine, are especially encouraged to apply.

U.S. Citizenship

All applicants must be US citizens or permanent residents of the United States with an alien registration receipt (green) card in their possession at the time they complete the AMCAS application. Applicants who apply as permanent residents will be required to submit a photocopy of their alien registration receipt card.

Florida Residents

Since the School of Medicine is no longer subsidized by the State of Florida, Florida residents are not given preference in admissions decisions. For tuition purposes, a Florida resident is one whose parents or guardians (or the applicant, if independent) have established legal residence in, and resided permanently in, the State of Florida for twelve consecutive months immediately prior to the first day of classes. Applicants can not claim Florida residency simply on the fact that they lived in Florida coincident with attending a college or university. To receive initial consideration as a Florida resident, applicants must declare Florida as their state of residence on their AMCAS application. Exceptions to this requirement will not be granted.

Residents of Other States

The Miller School of Medicine has made a significant commitment to enroll more students from outside the state of Florida. This departure from previous policy reflects the growing national prominence of the School of Medicine and the national and international reputation of our clinical facilities and specialty centers, and our outstanding research programs.

Financial Assistance Information

The University of Miami Miller School of Medicine is a private medical school. It has been a priority of the medical school to keep the tuition and fees very reasonable. Please visit our [Financial Assistance Website](#).

Additional Information

For additional information, write, call, or send an email message to:

Office of Admissions (R-159)

University of Miami Miller School of Medicine

PO Box 016159

Miami, FL 33101

(305)-243-3234

(305)-243-6548 (FAX)

med.admissions@miami.edu

Mission

Mission

The **NextGenMD curriculum strives to empower learners to transform lives and inspire learners to serve educational mission of the global community. The curriculum will produce transformational leaders who will shape University of Miami Miller School of Medicine is to graduate physicians with the future of medicine, direct ability and commitment to improve the health systems, of all populations through their leadership in patient care, research, education, and champion discovery and its translation into clinical interventions. the community.**

Program Goals

The NextGenMD curriculum emphasizes:

- Active, case-based, collaborative learning with early clinical experiences
- Integration of basic sciences, clinical medicine, and health system sciences throughout all phases of the curriculum
- Personalized areas of scholarly concentration including options for a 4-year dual degree or an accelerated transition to residency
- Opportunities to study social and cultural determinants of health in South Florida to address health disparities

Graduates of the program will demonstrate knowledge, skills, and attitudes/behaviors in four core domains: 1) Professionalism and Interpersonal Skills; 2) Health Systems Sciences; 3) Biomedical Knowledge and Clinical Care; and 4) Practice Based Learning

Goals

Student Learning Outcomes

Student Learning Outcomes

Students will demonstrate master of biomedical knowledge (i.e.. anatomy, biochemistry, immunology, etc.) required to practice clinical medicine.

Students will demonstrate clinical skills proficiency, such as performing a complete physical examination. Student competency in performing a physical examination and in clinical skills is evaluated by student performance on end of year 1 and 2 competency exercises.

Students will demonstrate application of knowledge and skills to clinical decision-making and the practice of medicine, including formulating differential diagnoses, and a diagnostic and therapeutic plan. Student competency in organizing clinical data, synthesizing clinical information and formulating management plans is demonstrated by performance on the United States Medical Licensing Step 2 Clinical Skills Examination.

Curriculum Requirements

Curriculum Requirements

The NextGenMD curriculum is divided into 3 phases:

Phase 1 is grounded in the foundational and translational sciences that are taught and learned in a case-based format that incorporates laboratory 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 1a is 4 weeks and largely under the Medicine as a Profession longitudinal theme (see later). Phase 1b is 12 weeks and is comprised of foundational, translational, and health systems sciences taught in the context of the healthy patient. Phase 1C is 30 weeks and incorporates foundational, translational, and health systems sciences taught in a symptom-based format.

Phase 2 consists of integrated clinical clerkships, where continued themes of foundational, translational, and health systems sciences are embedded within clerkships; this provides students ample experience to plan their future areas of concentration. Phase 2 is completed over 12 months and begins with an introductory bootcamp to the clerkship curriculum that covers core content areas: defining the medical student role, interprofessional teamwork, basic procedural skills, basic documentation skills, self-directed learning techniques, and how to be an effective learner in the clinical setting. Additionally, the bootcamp covers content that this reinforced throughout the entire phase including social determinants of health, patient safety, leadership and health advocacy, wellness promotion, and quality improvement. Phase 2 is divided into four, 12-week integrated clerkships:

All clerkships begin with an introductory week of interprofessional simulation exercises between medical, nursing, and other health professions students at sites including the Simulation Hospital at our School of Nursing and Health Studies. Basic science content is delivered using multiple modalities including online learning and interactive large group sessions, in addition to case-based collaborative learning that occurs in the introductory week and continues weekly during each clerkship block.

Between Phases 2 and 3, students are provided dedicated time to prepare for and take USMLE Steps 1 and 2CK.

Phase 3 occurs over 17 months and allows all students to develop a personalized pathway of excellence in a specialized area of interest, including scholarly work, dual-degree pursuits, or an early transition to residency. All students are required to select a pathway of emphasis for their scholarly work, and obtain a dual degree from a selection of existing 4-6-year dual degrees in addition to new 4-year dual degrees being developed. A select group of students who meet defined competencies can enter residency early after 3 years. The accelerated pathway to residency will be available to no more than 10% of the class and includes residency programs within our institutions. [Curriculum Requirements](#)

Course List

Code	Title	Credit Hours
MDR-501	Fundamentals of Biomedical Science: Molecular Basis of Life	4
MDR-502	Fundamentals of Biomedical Science: Cellular Function and Regulation I	2
MDR-503	Fundamentals of Biomedical Science: Host Defense, Pathogens, and Pathology	6
MDR-504	Human Structure I	6
MDR-505	Human Structure II	2
MDR-506	Neuroscience and Behavioral Science	8

Code	Title	Credit Hours
MDR-507	Cardiovascular System	8
MDR-510	Fundamentals of Biomedical Science: Cellular Function and Regulation II	2
MDR-513	Foundations in Population Health and Health System Sciences	2
MDR-518	Physicianship I	4
MDR-519	Physicianship II	4
MDR-530	Epidemiology I	1
MDR-550	Introduction to the Medical Profession	2
MDR-610	Respiratory System	5
MDR-612	Renal System	5
MDR-613	Endocrine and Reproductive System	5
MDR-614	Gastrointestinal System and Nutrition	5
MDR-615	Hematology and Oncology	5
MDR-616	Dermatology and Ophthalmology	2
MDR-619	Inflammation and Infectious Disease	4
MDR-620	Problem Based Learning I	0.25
MDR-621	Problem Based Learning II	0.75
MDR-628	Doctoring and Physicianship Skills III	4
MDR-629	Doctoring IV	4
MDR-630	Epidemiology II	1
MDR-702	Interprofessional Patient Safety	1
MDR-703	Core Family and Community Medicine	4
MDR-705	Core Generalist Primary Care Clerkship	4
MDR-706	Core Internal Medicine Clerkship	8
MDR-707	Neurology Clerkship	4
MDR-708	Core Obstetrics and Gynecology Clerkship	6
MDR-709	Core Pediatrics Clerkship	6
MDR-710	Core Psychiatry Clerkship	6
MDR-711	Core Surgery Clerkship	8
MDR-712	Anesthesiology Clerkship	2
MDR-812	Emergency Medicine Clerkship	4
MDR-909	Radiology Clerkship	2
MDR-957	Geriatrics and Palliative Medicine Clerkship	2
Total Credit Hours		80

Course List

Code	Title	Credit Hours
Phase 1: Pre-Clerkship		52

MDR ### Course MDR ### Not Found (Introduction to the Medical Profession: Inspire and Empower - 2 credits)

MDR ### Course MDR ### Not Found (Biomedical Principles of Health I - 5 credits)

Code Title

Credit

Hours

MDR ###	Course MDR ### Not Found	(Biomedical Principles of Health II - 6 credits)
MDR ###	Course MDR ### Not Found	(Medicine as a Profession I - 4 credits)
MDR ###	Course MDR ### Not Found	(Medicine as a Profession II - 4 credits)
MDR ###	Course MDR ### Not Found	(Symptoms, Signs and Diseases I - 3 credits)
MDR ###	Course MDR ### Not Found	(Symptoms, Signs and Diseases II - 4 credits)
MDR ###	Course MDR ### Not Found	(Symptoms, Signs and Diseases III - 6 credits)
MDR ###	Course MDR ### Not Found	(Symptoms, Signs and Diseases IV - 3 credits)
MDR ###	Course MDR ### Not Found	(Symptoms, Signs and Diseases V - 5 credits)
MDR ###	Course MDR ### Not Found	(Symptoms, Signs and Diseases VI - 6 credits)
MDR ###	Course MDR ### Not Found	(Scholarly Concentration I - 4 credits)

Phase 2: Integrated Clerkships

52

MDR ###	Course MDR ### Not Found	(Introduction to the Clerkship Experience - 2 credits)
MDR ###	Course MDR ### Not Found	(Practice of Medicine - 12 credits)
MDR ###	Course MDR ### Not Found	(From ER to OR - 12 credits)
MDR ###	Course MDR ### Not Found	(Mind, Matter and Medicine - 12 credits)
MDR ###	Course MDR ### Not Found	(Health through the Lifespan - 12 credits)
MDR ###	Course MDR ### Not Found	(Medicine as a Profession III - 2 credits)

Phase 3: Advanced 1, 2

40

Introductory Boot Camp

Subinternship

Selectives (Required)

Electives

Scholarly Concentration

MDR ###	Course MDR ### Not Found	(Medicine as a Profession IV)
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Transition to Residency

Total Credit Hours

144

1A minimum of 40 credits is required for Phase 3. It is expected that students will do more.

2Specific courses will be developed at a later date to cover the areas listed in this section for Phase 3.

Electives/ Sub- Internships in Medicine

Course List

Code	Title	Credit Hours
MDR 819	Family Medicine Sub-I	4
MDR 847	JMH Medicine Sub-I	4
MDR 852	Neurosurgery Sub-I	4
MDR 856	Gynecologic Oncology Sub-I	4
MDR 857	Maternal Fetal Medicine Sub-I	4
MDR 863	Orthopedic Trauma Sub-I	4

Code	Title	Credit Hours
MDR 875	Otolaryngology Sub-I	4
MDR 892	Pediatric Intensive Care Unit Sub-I	4
MDR 897	Pediatrics Sub-I	4
MDR 917	Burn Unit Sub-I	4
MDR 919	Cardiothoracic Surgery Sub-I	4
MDR 920	General Surgery EI Sub-I	4
MDR 921	General Surgery EII Sub-I	4
MDR 922	General Surgery EIII Sub-I	4
MDR 927	Pediatric Surgery Sub-I	4
MDR 937	Urology Sub-I	4
MDR 941	HCH Cardiothoracic Surgery Sub-I	4
MDR 943	General Surgery E IV Sub-I	4
MDR 944	MIA VAMC General Surgery Sub-I	4
MDR 958	UMH Medicine Sub-I	4
MDR 959	JFK Medicine Sub-I	4
MDR 961	MIA VAMC Medicine Sub-I	4
MDR 1028	HCH Medicine Sub-I	4
MDR 1029	Plastic Surgery SUB-I	4

Plan of Study

Plan of Study

**UNIVERSITY OF MIAMI
MILLER SCHOOL
OF MEDICINE**

NEXTGENMD

Empower to Transform, Inspire to Serve

PRE-CLERKSHIP PHASE

1A: Inspire & Empower	1B: Foundations Biomedical Sciences	1C: Examine Human Disease through Symptoms											
AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

CLERKSHIP PHASE: Integrated Clerkships

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	USMLE		
Mind, Matter, and Medicine Practice of Medicine From the ER to the OR Health through the Lifespan Intersections												OCT	NOV	DEC

ADVANCED PHASE: Pathways & Capstones

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
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Core Internship | Electives | Bethune and Noel Rooms | Specialty Electives | Integrated Science Courses

Medicine as a Profession (Longitudinal)

Clinical Skills | Professionalism | Communication Skills | Population Health | Health System Sciences | Nutrition & Wellness | Personal Development

Scholarly Concentration (Longitudinal)<http://www.med.miami.edu/education>

Plan of Study Grid

Freshman Year	Credit Hours
MDR 501 Fundamentals of Biomedical Science: Molecular Basis of Life	4
MDR 502 Fundamentals of Biomedical Science: Cellular Function and Regulation I	2
MDR 503 Fundamentals of Biomedical Science: Host Defense, Pathogens, and Pathology	6
MDR 504 Human Structure I	6
MDR 505 Human Structure II	2
MDR 506 Neuroscience and Behavioral Science	8
MDR 507 Cardiovascular System	8
MDR 510 Fundamentals of Biomedical Science: Cellular Function and Regulation II	2
MDR 513 Foundations in Population Health and Health System Sciences	2
MDR 518 Physicianship I	4
MDR 519 Physicianship II	4
MDR 530 Epidemiology I	1
MDR 550 Introduction to the Medical Profession	2
- Credit Hours	0
Sophomore Year	
MDR 610 Respiratory System	5
MDR 612 Renal System	5
MDR 613 Endocrine and Reproductive System	5
MDR 614 Gastrointestinal System and Nutrition	5
MDR 615 Hematology and Oncology	5
MDR 616 Dermatology and Ophthalmology	2
MDR 619 Inflammation and Infectious Disease	4
MDR 620 Problem-Based Learning I	0.25
MDR 621 Problem-Based Learning II	0.75
MDR 628 Doctoring and Physicianship Skills III	4
MDR 629 Doctoring IV	4
MDR 630 Epidemiology II	1
- Credit Hours	0
Junior Year	
MDR 702 Interprofessional Patient Safety	1
MDR 703 Core Family and Community Medicine	4
MDR 705 Core Generalist Primary Care Clerkship	4
MDR 706 Core Internal Medicine Clerkship	8
MDR 708 Core Obstetrics and Gynecology Clerkship	6
MDR 709 Core Pediatrics Clerkship	6

MDR 705 Core Pediatrics Clerkship	6
MDR 710 Core Psychiatry Clerkship	6
MDR 711 Core Surgery Clerkship	8
800+ Electives (Exception: Core and Required Clerkships)	6
- Credit Hours	0
Senior Year	
MDR 707 Neurology Clerkship	4
MDR 712 Anesthesiology Clerkship	2
MDR 812 Emergency Medicine Clerkship	4
MDR 909 Radiology Clerkship	2
MDR 957 Geriatrics and Palliative Medicine Clerkship	2
Refer to Sub-Internship	4
800+ Electives (Exception: Core and Required Clerkships)	12
- Credit Hours	0
- Total Credit Hours	0

Admission Requirements

N/A. No change from current admissions requirements.

Rationale

Rationale

The faculty through our LCME self-study from 2015-17 determined that curricular renewal was indicated, leading to NextGenMD. The NextGenMD curriculum, born out of the work of a 2017 taskforce and 8 planning teams working since then, identified 6 key pillars of the new curriculum including: building from the right substrate of learners, assessments informing curriculum, disarticulation of the traditional 2+2 curricular structure, emphasis on active learning methodologies, longitudinal skills and mentoring, and an institutional commitment to education.

Market Demand

Relationship to Other Programs

We have been working with the program directors from our approved dual degree programs (MD/MPH, MD/MS Genomic Medicine, MD/MBA, MD/PhD, MD/JD) to determine the best way to coordinate these programs within the new NextGenMD curriculum.

Library Resources Available and Needed to Support the Program

Educational Space

The NextGenMD curriculum in Phases 1 and 2 will require the use of small group and large group teaching rooms for self-directed case-based inquiry and guided case-based collaborative learning through case-based learning and team-based learning formats. Prior to AY2019-20, an additional 7 small group teaching rooms were built at the Calder Medical Library bringing the total small group teaching rooms to 31. To accommodate team-based learning in larger groups, the Dean has re-allocated six departmental teaching spaces to be used for the NextGenMD curriculum; all of these departmental classrooms can be configured for team-based learning, have been updated with the latest audiovisual technology, and are in close proximity to the Rosenstiel Medical Sciences Building. The table seen in the attachment outlines current and new teaching spaces (in bold).

Information Technology

The NextGenMD curriculum will employ new educational technology and learning platforms in addition to continuing to use Blackboard, the learning management system supported by the University of Miami. The Miller School has already been utilizing Medtrics for curriculum management and database. NextGenMD will expand its use of Medtrics for student assessment, course management and scheduling in addition to student portfolios. The Miller School had also been using the Osmosis platform as a companion for online videos, self-assessment questions, and a student performance dashboard in selected pre-clerkship courses/modules. NextGenMD will expand the use of Osmosis for courses/modules throughout all 3 Phases. Domain and Discipline directors in addition to other faculty content experts will work with the Osmosis team to update content videos in addition to self-assessment questions.

During the clerkship year, no additional IT support will be required. All clinical sites utilize electronic health records and have high-speed Internet to which all students have access. Each of the hospital sites offers access to computers with Internet access and online educational resources. University of Miami students on clinical rotations have access to all Calder Medical Library electronic resources. Each of the hospital sites offers access to on-site medical libraries, which can also be used by students as study space. Both guest and secure wireless networks are available throughout the Medical Campus in public spaces as well as classrooms, labs, offices, lounges, and clinical spaces. Faculty and students at the Miller School are supported by a group of eight IT staff members who are not shared with another school or college. These Medical Education IT staff address specific educational needs such as recording lectures, running servers that support medical education functions, updating classroom technology, and creating new online educational materials. In addition to their normal duties, this group works with faculty to explore new technologies, services, and pedagogical techniques that can enrich the medical education experience. The Medical Education IT staff are connected to the larger University of Miami IT department so they can leverage the staffing and specialized skills of the broader IT organization for needs such as server security, desktop support, instructional design, learning space design, and network connectivity.

Other Resources Available or Needed to Support the Program**Faculty**

NextGenMD will change our current definition of an educator, with a greater emphasis on longitudinal mentoring than before. There will be a cohort of Lead Educators, defined as those medical school teaching faculty with a significant involvement in the NextGenMD curriculum. These educators will have varied roles

described below, with designated support for each. To provide the appropriate support for each faculty member to focus on the educational mission, faculty compensation in NextGenMD will move from our historic educational relative value unit (eRVU) model to a full-time equivalent (FTE) model of protecting faculty's time. Phase 1 will be broken down into two parts; the mornings will be dedicated to the delivery of the traditional science content while the afternoons will focus on the themes of Medicine as a Profession (including Clinical Skills and the Early Clinical Experiences) and Scholarly Concentration. For the mornings, there will be facilitators for the case-based learning sessions that occur for several hours per week; these faculty will have support for this effort. See the attached schematic of the weekly morning and afternoon schedules (Appendix 3). There will be other ad hoc faculty who participate in specific cases based on the content area that aligns with their specialty (e.g. Just in Time delivery). Overseeing the content will be 2 groups of faculty: Domain Directors and Discipline Directors. Domain Directors will oversee several weeks of Phase 1 content clustered based on symptom complex; across the 42 weeks of Phase 1 content, there will be 7 Domain Directors (2 in Phase 1b and 5 in Phase 1c) each with 0.2 FTE of protection. The Discipline Directors focus on Phase 1 but, unlike the Domain Directors, have a longitudinal role across all 3 Phases of NextGenMD. There are 9 Discipline Directors from the laboratory sciences (Anatomy & Cell Biology, Physiology, Biochemistry and Molecular Biology, Microbiology/Immunology, Pharmacology) and clinical sciences (Genetics, Radiology, Pathology, Oncology); these faculty are supported 0.3 FTE to ensure the appropriate delivery of their content expertise across Phase 1 but also in Phase 2 (the clerkships) and Phase 3 (the specialty-specific phase).

Much of the theme of Medicine as a Profession will be delivered through the Miller School's existing Academic Societies model, where the medical students are broken up into 12 academic societies at Orientation with much of the peer mentoring occurring in this context with the help of faculty mentors. However, in NextGenMD this will be a school-supported role, in which two faculty members will be assigned to each society with 0.25 FTE supported for this function. Each faculty member will be assigned 8 students per year (half of an incoming cohort per Society) and will serve in various related capacities including mentor, advisor, coach, clinical skills preceptor, and learning community facilitator. Faculty members will also provide competency assessments of learners, but they will specifically evaluate students from other Societies to avoid a potential conflict of interest. Importantly, the current structure of specialty- and research-specific mentors will remain in place, with the Society faculty serving as referrals to the more tailored mentors. Emphasizing the importance of leadership involvement in this structure, each of the 12 Societies will have a third faculty mentor who is part of the central administration of Medical Education (e.g. medical education deans in curriculum and student affairs, deans in other areas outside of undergraduate medical education, and leaders of the Department of Medical Education and the Academy of Educators). These third mentors per Society will serve as the backup for student sessions that need to be covered and will be involved with the social aspect of the Societies.

Medicine as a Profession also includes the Early Clinical Experiences in Phase 1. In the first part of this phase, students will work with local community preceptors across various specialties, focusing in part on standard history, physical examination, and communication skills but also getting real-world exposure to health systems science, the social determinants of health, and the business of medicine; close coordination with the medical school's Alumni Association has allowed the NextGenMD curriculum to engage with a large pool of local physicians who are interested in working with medical students in their practices. In the last section of the Early Clinical Experiences, students will get an EMT Lite experience that highlights interprofessional education in preparation for the clerkship year. EMTs and paramedics will teach 6 skills sessions covering most of the basics

of EMT training, and coupled with that will be 6 ride-alongs with local paramedics and fire fighters. This experience is made possible by the strong existing relationship between the Gordon Center for Research in Medical Education, which provides training for many of the first responder personnel in South Florida, and local firefighter, paramedic, and EMT units.

The Scholarly Concentration theme will be overseen by a faculty member supported for that role. Students in dual degree programs will have degree-specific oversight co-managed by the relevant Department/School providing the second degree. Students accelerating early into residency will work with their Society faculty in collaboration with central medical education administration for appropriate oversight. For the remainder of students who elect a Pathway of Emphasis, Pathway Directors will be supported to provide oversight of the students' scholarly endeavors as well as to provide the appropriate assessments relevant to each Pathway. Phase 2 will be overseen by 4 Integrated Clerkship Directors; each of those directors will have specialty-specific co-directors also supported for this effort. This will be an inter-departmental collaboration, as the Integrated Clerkship Directors will oversee students across multiple clinical departments. The Discipline Directors described in Phase 1 will continue to ensure appropriate content delivery of their respective themes in Phase 2, and the Society faculty and Scholarly Concentration faculty will also continue to oversee students in Phase 2.

Phase 3 is very individualized based on a student's scholarly concentration and specialty interest; to that end, there will be a menu of robust selectives that are overseen by Selective Directors supported for this effort with guidance from the Discipline Directors noted above, in addition to a larger menu of low-stakes Electives mostly for experiential value. Here, as in Phases 1 and 2, the Society faculty and Scholarly Concentration faculty will continue to oversee students.

Given the complexity of the student assessment portfolio, there will be a Director of Assessment and Entrustment across all 3 Phases overseeing a new assessment and entrustment faculty committee.

Given these changes in faculty structure and roles, faculty development is a critical for success. This academic year, a new Senior Associate Dean for Faculty Affairs was appointed, with the principal charge of faculty development. A new Department of Medical Education was also created to house much of the faculty development work. In AY20, there is a heavy emphasis on developing faculty to be able to teach and facilitate in the NextGenMD curriculum.

Curriculum

Program Curriculum

The proposed changes will take effect in Fall 2020 for new students only. Upperclass students will continue to follow the current curriculum through graduation. For this reason, we will continue to offer existing courses and will need to develop new course numbers for the new curriculum. The new curriculum involves changes in structure and pedagogy rather than changes in content.

Upload Syllabi for Any New Courses

Proposed Schedule of Course Offerings for the First Three Years

CIP Code

Proposed CIP Code

Faculty

Program Directors

Upload CV(s)

Program Faculty

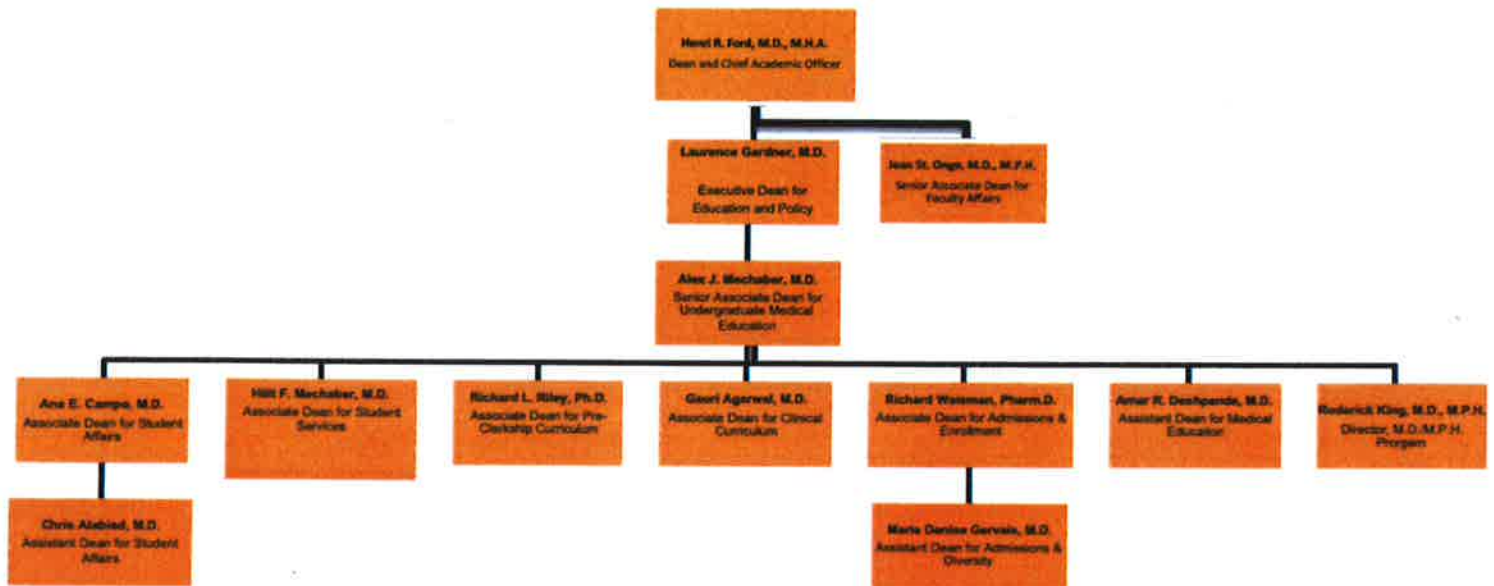
Students

Applicant Pool

Enrollment Projections

Administration

There are no changes to the current leadership structure of the program. The Dean is the Chief Academic Officer. The organizational chart below depicts the Dean and all other decanal support for the MD program.



Comparison

Peer Comparisons

Documents

Attach Supporting Documentation

[MD Attachments.pdf](#)

Reviewer

Comments

Patty Murphy (pxm491) (02/03/20 2:58 pm): As noted in the attached letter from the Speaker of the Medical Faculty Council, the Executive Faculty Curriculum Steering Committee, a standing committee of the Medical School Faculty Council, voted 13-1 to approve this proposal

on August 27, 2019, and the Medical School Faculty Council approved this proposal on December 10, 2019.

Patty Murphy (pxm491) (02/03/20 3:00 pm): This change does not represent a significant departure from the currently approved program because it is a change in design, not content. Therefore notification to or approval from SACSCOC is not required.

Key: 454

January 31, 2020

Linda Neider, Ph.D., M.A., M.B.A.
Chair, Faculty Senate
University of Miami
Ashe Building, Suite 325
252 Memorial Drive
Coral Gables, FL 33146

Re: Council Approved a Proposal for New Medical School Curriculum for
Office of Medical Education

Dear Dr. Neider,

This is to inform the Faculty Senate that the Medical School Faculty Council met on December 10, 2019, to review the Proposal for the Creation of a new curriculum, NextGenMD, which will reside in the Office of Medical Education at the University of Miami Miller School of Medicine (UMMSM). The Executive Faculty Curriculum Steering Committee (EFCSC), a standing committee of the Medical School Faculty Council, a body with appropriate expertise and membership, voted 13-1 to proceed with NextGenMD on August 27, 2019. Based on EFCSC approval, the new curriculum was unanimously approved by the Faculty Council membership with the stipulation that Senior Associate Dean for Undergraduate Medical Education or his/her designee will provide an update to the council once every year. Senior Associate Dean for Undergraduate Medical Education and Dean of the Medical School have agreed to provide periodic and yearly update about any change in curriculum and the information pertaining to the efficacy of the new curriculum to the Medical School Faculty Council.

Respectfully submitted,


Sanjoy K. Bhattacharya, M. Tech, Ph.D.
Speaker, Medical Faculty Council

February 3, 2020

Linda Neider, Ph.D.
Chair, Faculty Senate
University of Miami
Ashe Building, Suite 325
252 Memorial Drive
Coral Gables, FL 33146

Re: Dean's Support for Miller School of Medicine's NextGenMD Curriculum

Dear Dr. Neider:

I write to notify you of my full support for the University of Miami Miller School of Medicine's proposal for the NextGenMD curriculum. The faculty began this curricular renewal process in the spring of 2017 and are fully prepared to implement Phase 1 of this curriculum in August 2020.

As noted by the Faculty Council, the overall curriculum was approved by our Executive Faculty Curriculum Steering Committee in August 2019. This Faculty Council committee is charged with the oversight and management of the MD curriculum.

The atmosphere at the Miller School is charged with positive energy. Our leadership, faculty, students, and staff have come together around this opportunity to enhance the educational program. We are confident that this new curriculum will help our learners transform lives and empower them to serve our global community.

Thank you for the opportunity to inform the Faculty Senate of our efforts. Please do not hesitate to reach out to me if you have concerns or need additional information.

Sincerely,



Henri R. Ford, M.D., M.H.A.

December 2, 2019

Barbara Barzansky, PhD, MPHE
American Medical Association
330 North Wabash Avenue, Suite 39300
Chicago, IL 60611-5885

Veronica M. Catanese, MD, MBA
Association of American Medical Colleges
665 K Street NW Suite 100
Washington, DC 20001-2399

Dear Drs. Barzansky and Catanese,

I write to notify you that the University of Miami Miller School of Medicine (UMMSM) is undergoing major curriculum reform of the medical education program as a whole. We began this process in spring 2017 and will implement Phase I in August 2020. The enclosed information will provide significant detail of the new curriculum.

We are planning three phases of the new curriculum. Phase 1, or the pre-clerkship phase, runs from August of the first year through September of the second year, taking into account breaks and eight weeks in the summer to allow students interested in pursuing structured research experiences at NIH and other institutions, dual degree work or other scholarly work to be able to do this. Phase 2, or the clerkship phase, begins in October of the second year of matriculation and runs through September of the third year. We then give students dedicated time off to study and prepare for the USMLE exams. Phase 3, or the advanced phase, begins in January of the 3rd year and continues until graduation. The curriculum will have two longitudinal themes – Medicine as a Profession and Scholarly Concentration – that run concurrently throughout all four years.

I am very hopeful as we embark on this transformational process. The atmosphere here at the UMMSM is charged with positive energy. Our leadership, faculty, students, and staff have come together around this opportunity to improve the educational program. We are confident this new curriculum will help our learners transform lives and empower them to serve our global community.

Thank you for the opportunity to inform the LCME Committee of our efforts. Please do not hesitate to reach out to me if you have concerns or need additional information.

Sincerely,



Henri R. Ford, MD, MHA



LIAISON COMMITTEE ON
MEDICAL EDUCATION
www.lcme.org

**MAJOR CURRICULAR MODIFICATION
NOTIFICATION FORM**

Please use this form to notify the Liaison Committee on Medical Education (LCME) of any major reorganization of one or more years of the medical education program or the program as a whole. No notification is required for changes such as revisions to individual courses or individual clerkships or the introduction of a new course.

If curricular modification is the introduction of a new parallel curriculum (track), please instead complete the New Parallel Curriculum (Track) Notification Form.

If you have questions or need advice on how to complete this form, contact the LCME Secretariat at lcme@aamc.org.

SUBMISSION INSTRUCTIONS

Please email lcmesubmissions@aamc.org a dated and signed cover letter from the medical school dean addressed to the LCME Co-Secretaries and the completed notification form in a single PDF.

The cover letter and notification form must be submitted in time for the LCME to review the information prior to implementation of the change. Notification forms are reviewed as part of regularly scheduled LCME meetings. Use the table below to determine when the notification will be reviewed.

Date Form Received	Date Notification will be Reviewed by the LCME
August 2 – December 1*	February LCME meeting
December 2 – April 1*	June LCME meeting
April 2 – August 1*	October LCME meeting

*If the 1st of these months falls on weekend or holiday, submission will be accepted the next non-holiday business day.

Please do not include hyperlinks within the document(s) of the submission. If a reference to a website is necessary, create an appendix with a table of contents and include PDFs of the webpages and/or screenshots.

Date of Submission	12/1/2019
School Name	University of Miami Leonard M. Miller School of Medicine
Date or academic year change will become effective	August 2020

Name and title of the program official submitting the information	Alex J. Mechaber, MD Senior Associate Dean for Undergraduate Medical Education, Bernard J. Fogel Chair in Medical Education, Professor of Medicine
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Please complete the following questions with as much detail as possible. Expand the available space, as needed.

1. Summarize the structure of the proposed curriculum modification, including the expected goals and how they will be evaluated. As an attachment, include a curriculum schematic that illustrates the placement of courses/clerkships within the revised portion of the curriculum.

The NextGenMD curriculum, born out of the work of a 2017 taskforce and 8 planning teams working since then, identified 6 key pillars of the new curriculum including: building from the right substrate of learners, assessments informing curriculum, disarticulation of the traditional 2+2 curricular structure, emphasis on active learning methodologies, longitudinal skills and mentoring, and an institutional commitment to education.

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.

The overall program education goals for NextGenMD are outlined below and attached in Appendix 1. Graduates of the program will demonstrate the following knowledge, skills, and attitudes/behaviors in the highlighted core domains:

Professionalism and Interpersonal Skills

- Develops and maintains a professional identity
- Maintains emotional, physical and mental health in the pursuit of continual personal and professional growth
- Collaborates as a member of the interprofessional team (includes patients and care givers)

Health Systems Sciences

- Works as a leader in the healthcare delivery system
- Recognizes and addresses social and environmental determinants of health for patients and populations

Biomedical Knowledge and Clinical Care

- Obtains, organizes and communicates clinical data
- Applies foundational science to analyze and prioritize clinical data
- Recommends management for core clinical experiences

Practice Based Learning

- Constructs, pursues and revises an individualized learning plan
- Identifies and investigates problems in the natural, social, and health system sciences that influence patient health and well being
- Forms clinical questions and retrieves evidence to advance patient care

The NextGenMD curriculum is divided into 3 phases (schematic attached as Appendix 2):

Phase 1 is grounded in the foundational and translational sciences that are taught and learned during the first year through symptom-based cases virtual clinics that incorporate health systems science,

social determinants of health, core clinical skills, and professionalism. Phase 1 is completed over 14 months, inclusive of 2 months of capstone work.

Phase 1a (Inspire and Empower)	4 weeks	Consists of content under the Medicine as a Profession longitudinal theme (see below)
Phase 1b (Foundations of Biomedical Sciences)	12 weeks	Comprised of foundational, translational, and health systems sciences taught in the context of the healthy patient
Phase 1c (Examine Human Disease Through Symptoms)	30 weeks	Incorporates foundational, translational and health systems sciences taught using symptom-based cases

Phase 2 consists of integrated clinical clerkships during the second year, where continued themes of foundational, translational, and health systems sciences are embedded within clerkships; this provides students ample experience to plan their future areas of concentration. Phase 2 is completed over 12 months. Phase 2 begins with an introductory bootcamp to the clerkship curriculum. This bootcamp covers these core content areas: defining the medical student role, interprofessional teamwork, basic procedural skills, basic documentation skills, self-directed learning techniques, and how to be an effective learner in the clinical setting. Additionally, the bootcamp covers content that this reinforced throughout the entire phase including social determinants of health, patient safety, leadership and health advocacy, wellness promotion, and quality improvement. The clerkship experience is divided into 4 12-week integrated clerkships:

Practice of Medicine	Inpatient and outpatient internal medicine Integration of geriatrics, palliative medicine and specialty medicine
From ER to the OR	Emergency Medicine Anesthesiology Surgery
Mind, Matter, and Medicine	Neurology Psychiatry Family Medicine
Health Through the Lifespan	Obstetrics and Gynecology Pediatrics

All clerkships begin with a pre-clerkship block week that consists of case-based collaborative learning sessions highlighting basic science content pertinent to the upcoming clerkship. This block week also consists of interprofessional simulation exercises between medical, nursing, and other health professions students at sites including our School of Nursing Simulation Hospital. Basic science content will be taught using multiple modalities including online learning and interactive large group sessions, in addition to case-based collaborative learning that continues weekly during each clerkship block.

Phase 3 allows all students in their final years of school to develop a personalized pathway of excellence in a specialized area of interest, including scholarly work, dual-degree pursuits, or an early transition to residency. All students will either be required to select a pathway of emphasis for their scholarly work, obtain a dual degree from a menu of existing 4-6 year dual degrees in addition to new 4 year dual degrees being developed, or for a select few students who meet defined competencies, enter residency early after 3 years. The accelerated pathway to residency will be available to no more than 10% of the class. Phase 3 for most students is completed over 17 months.

The highlights of phase 3 are as follows:

Career Development	Students will select from an individualized menu of clinical electives
Advanced Basic Science and Clinical Science Selectives	Students will be required to complete a number of advanced integrated basic science and clinical science selectives
Required Selectives	Students will be required to complete selectives in Population Health and Health Systems Sciences
Sub-internship	Students will be required to complete a sub-internship individualized towards their specialty of choice
Scholarly Project	Students will have a scholarly project to complete with defined deliverables including a capstone project
Transition to Residency	Students will complete both general and specialty-specific transition to residency courses prior to graduation

Longitudinal Themes: There are two longitudinal themes across all three phases and all four years of the curriculum.

- **Medicine As a Profession** (essentials of medical practice) covers the following 7 content areas: clinical skills, professionalism, communication skills, population health, health systems sciences, nutrition and wellness, and personal development. Within this theme, students have biweekly early clinical experiences longitudinally in the offices of community voluntary faculty, an EMT Lite experience developing skills in emergency response including experiential opportunities with local paramedics, and experience in navigating patients through the local health care landscape.
- **Scholarly Concentration** fosters the Miller School's core identity of community engagement and social responsibility. It integrates scholarly activity into the curriculum, mirroring the balance of research, education, and clinical care required of the academic physician today. Specific content areas taught in this theme for all students include research design, epidemiology/biostatistics, quality improvement, and collaborative working environments.

2. Summarize the methods of instruction and assessment and the expected learning outcomes for the revised curriculum.

During phase 1, NextGenMD will employ a combination of self-directed case-based inquiry, guided case-based collaborative learning, and lab case correlates to provide just in time delivery of basic and health system sciences. Students will be oriented and expected to utilize self-regulated mixed learning methods to prepare for the case discussions.

Assessment is the cornerstone on which the curricular revision is built. The language of entrustability is implied throughout the curricular blueprint from the program to session level objectives. The AAMC's core entrustable professional activities (EPAs) are all represented in the curriculum and the language of discrete observable behaviors anchors each objective. The guiding principle of this approach is that repeated direct observations of the students performing the core activities of a physician should form the basis of determining their readiness for independent practice. Throughout all three phases of the NextGenMD curriculum, students and educators will track individual progress using frequent low-stakes assessments. Students will be coached to create individual learning plans based on their interests and demonstrated strengths and weakness. Students will be required to choose one of three pathways that will inform their individualized

learning plan: early enrollment into residency, a scholarly concentration, or a dual degree. An assigned coach/mentor will collaborate with students to track their progress towards their personal and institutional goals using an e-portfolio and academic dashboard. Institutional thresholds for promotion will guide both decisions regarding academic advancement and early entry into residency.

Students in Phase 1 will be assessed primarily through both team performance and individual reflection in the context of our case-based collaborative learning curriculum. Probing short answer and essay questions will allow students to demonstrate deeper knowledge and mastery learning while limited use of multiple-choice questions (MCQs) will be employed to provide feedback regarding students' progress towards meeting external measures of progress in similarly formatted exams such as the USMLE Step Examinations. Professional skills such as leadership and communication will be evaluated using direct observation, personal reflection, and peer feedback.

As a student advances to Phase 2, their evaluations will derive an increasing component from their performance on simulations and real-world applications of knowledge. Observed Standardized Clinical Examinations (OSCEs) will make up a substantial portion of their evaluations and will be tailored to explore performance in nuanced areas of patient evaluation and care as well as leadership and communication skills. Once again, peer evaluation and personal reflection will be utilized as evaluation methods for progress in areas of professionalism and personal wellness. An added dimension of assessment by allied health professionals will prepare students to recognize their strengths and weakness as they pertain to teamwork across professions.

The goal of evaluation in Phase 3 is to confirm readiness for entry into residency as well as progress towards a scholarly concentration or dual degree. The assessments obtained in Phases 1 and 2 will be contextualized in Phase 3 to evaluate the sophisticated advanced level student. Advanced students will be evaluated in patient care settings performing supervised tasks commensurate to their level of training. Scholarly production will be qualitatively assessed by assigned coaches/mentors who will track the students' progress in developing practical expertise in their chosen pathway and will inform decisions regarding attainment of Certificates in the respective areas of study or dual degrees. Degree-specific progress will be co-evaluated by the Department or School granting the second degree.

The ultimate goal is to build a case for readiness for residency based on the consistent successful performance of professional activities that map to both EPAs and GME Core Competencies and Milestones.

3. Complete the following table with the planned student enrollment for each of the first four years the proposed curriculum will be in effect:

Curriculum Year	2020-21	2021-22	2022-23	2023-24
Year One	200	200	200	200
Year Two	0	200	200	200
Year Three	0	0	200	200
Year Four	0	0	0	200

4. Summarize any specific/additional resources that will be needed for the change, including faculty, IT, educational space, clinical resources, and funding. Summarize the availability of such resources to support the change.

Faculty

NextGenMD will change our current definition of an educator, with a greater emphasis on longitudinal mentoring than before. There will be a cohort of Master Educators, defined as those medical school teaching faculty with a significant involvement in the NextGenMD curriculum. These Master Educators will have varied roles described below, with designated support for each. To provide the appropriate support for each faculty member to focus on the educational mission, faculty compensation in NextGenMD will move from our historic educational relative value unit (eRVU) model to a full-time equivalent (FTE) model of protecting faculty's time.

Phase 1 will be broken down into two parts; the mornings will be dedicated to the delivery of the traditional science content while the afternoons will focus on the themes of Medicine as a Profession (including Clinical Skills and the Early Clinical Experiences) and Scholarly Concentration. For the mornings, there will be facilitators for the case-based learning sessions that occur for several hours per week; these faculty will have support for this effort. See the attached schematic of the weekly morning and afternoon schedules (Appendix 3). There will be other ad hoc faculty who participate in specific cases based on the content area that aligns with their specialty (e.g. Just in Time delivery). Overseeing the content will be 2 groups of faculty: Domain Directors and Discipline Directors. Domain Directors will oversee several weeks of Phase 1 content clustered based on symptom complex; across the 42 weeks of Phase 1 content, there will be 7 Domain Directors (2 in Phase 1b and 5 in Phase 1c) each with 0.2 FTE of protection. The Discipline Directors focus on Phase 1 but, unlike the Domain Directors, have a longitudinal role across all 3 Phases of NextGenMD. There are 9 Discipline Directors from the laboratory sciences (Anatomy & Cell Biology, Physiology, Biochemistry and Molecular Biology, Microbiology/Immunology, Pharmacology) and clinical sciences (Genetics, Radiology, Pathology, Oncology); these faculty are supported 0.3 FTE to ensure the appropriate delivery of their content expertise across Phase 1 but also in Phase 2 (the clerkships) and Phase 3 (the specialty-specific phase).

Much of the theme of Medicine as a Profession will be delivered through the Miller School's existing Academic Societies model, where the medical students are broken up into 12 academic societies at Orientation with much of the peer mentoring occurring in this context with the help of faculty mentors. However, in NextGenMD this will be a school-supported role, in which two faculty members will be assigned to each society with 0.25 FTE supported for this function. Each faculty member will be assigned 8 students per year (half of an incoming cohort per Society) and will serve in various related capacities including mentor, advisor, coach, clinical skills preceptor, and learning community facilitator. Faculty members will also provide competency assessments of learners, but they will specifically evaluate students from other Societies to avoid a potential conflict of interest. Importantly, the current structure of specialty- and research-specific mentors will remain in place, with the Society faculty serving as referrals to the more tailored mentors. Emphasizing the importance of leadership involvement in this structure, each of the 12 Societies will have a third faculty mentor who is part of the central administration of Medical Education (e.g. medical education deans in curriculum and student affairs, deans in other areas outside of undergraduate medical education, and leaders of the Department of Medical Education and the Academy of Educators). These third mentors per Society will serve as the backup for student sessions that need to be covered and will be involved with the social aspect of the Societies.

Medicine as a Profession also includes the Early Clinical Experiences in Phase 1. In the first part of this phase, students will work with local community preceptors across various specialties, focusing in part on

standard history, physical examination, and communication skills but also getting real-world exposure to health systems science, the social determinants of health, and the business of medicine; close coordination with the medical school's Alumni Association has allowed the NextGenMD curriculum to engage with a large pool of local physicians who are interested in working with medical students in their practices. In the last section of the Early Clinical Experiences, students will get an EMT Lite experience that highlights interprofessional education in preparation for the clerkship year. EMTs and paramedics will teach 6 skills sessions covering most of the basics of EMT training, and coupled with that will be 6 ride-alongs with local paramedics and fire fighters. This experience is made possible by the strong existing relationship between the Gordon Center for Research in Medical Education, which provides training for many of the first responder personnel in South Florida, and local firefighter, paramedic, and EMT units.

The Scholarly Concentration theme will be overseen by a faculty member supported for that role. Students in dual degree programs will have degree-specific oversight co-managed by the relevant Department/School providing the second degree. Students accelerating early into residency will work with their Society faculty in collaboration with central medical education administration for appropriate oversight. For the remainder of students who elect a Pathway of Emphasis, Pathway Directors will be supported to provide oversight of the students' scholarly endeavors as well as to provide the appropriate assessments relevant to each Pathway.

Phase 2 will be overseen by 4 Integrated Clerkship Directors; each of those directors will have specialty-specific co-directors also supported for this effort. This will be an inter-departmental collaboration, as the Integrated Clerkship Directors will oversee students across multiple clinical departments. The Discipline Directors described in Phase 1 will continue to ensure appropriate content delivery of their respective themes in Phase 2, and the Society faculty and Scholarly Concentration faculty will also continue to oversee students in Phase 2.

Phase 3 is very individualized based on a student's scholarly concentration and specialty interest; to that end, there will be a menu of robust selectives that are overseen by Selective Directors supported for this effort with guidance from the Discipline Directors noted above, in addition to a larger menu of low-stakes Electives mostly for experiential value. Here, as in Phases 1 and 2, the Society faculty and Scholarly Concentration faculty will continue to oversee students.

Given the complexity of the student assessment portfolio, there will be a Director of Assessment and Entrustment across all 3 Phases overseeing a new assessment and entrustment faculty committee.

Given these changes in faculty structure and roles, faculty development is a critical for success. This academic year, a new Senior Associate Dean for Faculty Affairs was appointed, with the principal charge of faculty development. A new Department of Medical Education was also created to house much of the faculty development work. In AY20, there is a heavy emphasis on developing faculty to be able to teach and facilitate in the NextGenMD curriculum.

The diagram below highlights the various faculty roles and degree of involvement by Phase:

	<u>Phase 1</u>	<u>Phase 2</u>	<u>Phase 3</u>	
Faculty Mentor	✓✓✓	✓✓	✓✓✓	
TBL facilitator	✓✓✓	-	-	
Domain Director	✓✓✓	-	-	✓✓✓ heavy involvement
Discipline Director	✓✓✓	✓✓	✓✓✓	✓✓ moderate involvement
Pathway Director	✓✓	✓	✓✓✓	✓ light involvement
Clerkship Director	-	✓✓✓	-	
Selective Director	-	-	✓✓✓	
Director, Assessments	✓✓✓	✓✓✓	✓✓✓	

Clinical Resources

For the first 3 years of the NextGenMD curriculum, we will also be teaching in the Legacy curriculum. Given the changes in scheduling, accommodations are being made both in instruction and teaching space to allow for the overlap. In AY20-21, the first year of the NextGenMD curriculum, the Legacy curriculum 2nd year students will still be in the pre-clerkship phase, mostly in the organ system modules. Currently, most organ system modules are taught twice, once for the MD students and once for the MD/MPH students. However, over the past few years there has been progressive integration of these two tracks, leveraging the best learning opportunities for each. Currently, 3 of the organ system modules in the MS2 year are taught concurrently (MD and MD/MPH cohorts together). In AY20-21, the other 5 organ system modules will be similarly merged and taught together such that the entire MS2 year will be the same for the MD and MD/MPH cohorts. This allows faculty overseeing the pre-clerkship phase to have about the same time commitment in this bulge pre-clerkship year; for example, a current organ system module director teaches 2 distinct modules in the current system (MD and MD/MPH courses) and in AY20-21 will still have 2 courses to teach (the combined MD and MD/MPH module in Legacy and the relevant domain of symptoms in Phase 1 of NextGenMD). The current predominantly lecture-based format of the MS2 years precludes any significant space issues for the didactic sessions, since the mornings are spent in an existing lecture hall with the other 2 auditoria available for the infrequent morning large group sessions in NextGenMD. For Small Group sessions, NextGenMD MS1 students will be using PBL and TBL-sized rooms in the mornings (while the Legacy MS2 students are in lecture), and the Legacy MS2 students can then use the PBL-sized rooms in the afternoons (when the NextGenMD MS1 students are doing Early Clinical Experiences, TBL sessions related to Medicine as a Profession, their Scholarly Concentration work, or Clinical Skills exercises).

In the yearly 6 week overlap of Phase 1 students that will first occur in AY21-22 (by that time the Legacy students will have completed the pre-clerkship curriculum), there is minimal faculty overlap; MS1 students will be in Phase 1b with predominantly basic scientists teaching while MS2 students will be in Phase 1c with predominantly clinicians teaching. The Early Clinical Experiences will also not overlap (MS1 students will have community preceptor experiences while MS2 students will be doing the EMT Lite experience including EMT skills sessions and paramedic ride alongs), and students will be at different phases of their Scholarly Concentration that precludes overlap. There will be overlap of resources for Clinical Skills and longitudinal mentoring, but for these 6 weeks the AM and PM sessions will be flipped for MS2 students to provide sufficient space (again keeping in mind Legacy students will

no longer be in the pre-clerkship phase, which opens up the space they were using).

In AY20-21, the Legacy MS2 students who all did the organ system modules together (MD and MD/MPH) will all finish in March 2021 (the normal time of year for the MD/MPH cohort and 6 weeks earlier for the MD cohort). All 200 students will then take 6 weeks of study time for the USMLE Step 1 Examination. After that, the MD/MPH have 6 weeks for Public Health courses while MD students have 6 weeks of traditional Legacy curriculum Electives. In June 2021 the 200 Legacy students who are rising to MS3 will do the first NextGenMD Integrated Clerkship for 12 weeks, then for the following 36 weeks there will be a clerkship bulge in which both NextGenMD MS2 and Legacy MS3 students are doing the NextGenMD Integrated Clerkships until June 2022 (described in greater detail below). The Legacy MS4 students then have a decompressed year since they will have already completed their 5 non-core required courses in the Integrated Clerkship model (previously these were required in the MS4 year but in NextGenMD are integrated into the core clerkships), and the NextGenMD students complete their last Integrated Clerkship before dedicated study time for USMLE Step 1 and Step 2 CK Examinations prior to Phase 3 that starts January 2023.

As the preclerkship phase is shortened, there will be additional students in the clinical environment. The 200 students in the Legacy Curriculum will begin Clinical Clerkships in June 2021. The 200 NextGenMD curriculum students who matriculate in 2020 will begin Phase 2 (Clinical Clerkships) in September 2021. Between September 2021 and June 2022, there will be approximately 400 students in the clinical environment. In order to mitigate the confusion of differing curricula within the clinical years with two separate groups of learners, all 400 students will experience the Next GenMD Curriculum for their clinical clerkships. This will allow Legacy curriculum students to benefit from the curricular innovations in NextGen and they will serve as an early pilot group in June 2021. This is being communicated to Legacy students through student leaders, townhall meetings, and multiple electronic communications.

The time period between September 2021 and June 2022 has been referred to as “The Bulge” by many medical schools that have experienced curricular change and a concordant temporary increase in students in the clerkship environment. The resources for the clinical instruction of medical students, including patient numbers, case mix, and inpatient and ambulatory teaching sites, are more than adequate and constitute a strength of the Miller School’s undergraduate medical education programs. Medical students receive their clinical instruction at a wide constellation of primary teaching sites for patient care experiences. Clinical teaching facilities include Jackson Memorial Hospital, (a public teaching hospital and one of the largest in the country), University of Miami Hospitals and Clinics, and the Miami VA Medical Center. At the Regional Medical Campus, teaching facilities include ten community hospital affiliations, health department clinics, and community physician offices to provide a wide range of clinical experience. The Associate Dean for Clinical Curriculum is actively meeting with Clerkship Directors to determine the existing capacity of each of the clerkships including previously underutilized clinical service lines within our current hospital and ambulatory sites; as an example, subspecialty service lines within Internal Medicine and Surgery have capacity for additional learners on the team. We are also exploring affiliations with community hospitals and practices to expand capacity. As an example, Memorial Healthcare System in Broward County is one of the largest public healthcare systems in South Florida and currently offers several residency training programs. Memorial has untapped capacity for a large number of medical students during our Bulge period and has expressed interest in providing clerkship experiences for our students.

Clerkship Directors will also require larger classroom space for clerkship didactic sessions, and a number of existing auditoria and large group meeting spaces will be utilized for this purpose. Online resources will also need to be created to educate faculty, residents, and students about the NextGenMD Curriculum. This will be done in coordination with the Office of Faculty Affairs.

The tables below list existing inpatient and ambulatory teaching sites.

Existing *inpatient teaching sites* where medical students take one or more required clerkships, which have capacity for expansion.

Facility Name (Campus)	Required Clerkships
Jackson Memorial Hospital (Miami)	MED, SUR, OBG, PSY, PED, ANES, EMED, NEUR, RAD
Veterans Administration Medical Center (Miami)	MED, SUR, PSY, ANES, GERI, NEUR
University of Miami Hospital (Miami)	MED, SUR, OBG, PSY, ANES, GERI, NEUR
UMHC/SCCC (Miami)	MED, SUR, OBG, RAD
Mount Sinai Medical Center (Miami)	MED
JFK Medical Center (RMC)	MED, SUR, NEUR, PSY, RAD, GERI, ANES
West Palm Beach VA Medical Center (RMC)	MED, SUR, GERI, PSY, RAD, GERI, ANES
Jupiter Medical Center (RMC)	OBG, SUR, RAD, ANES
Holy Cross Hospital (RMC)	OBG, EMED, MED, SUR, RAD, GERI, ANES
Broward Health-Chris Evert Children's Hospital (RMC)	PED
South County Mental Health Center (RMC)	PSY
Morse Geriatric Center (RMC)	GERI
Good Samaritan Hospital (RMC)	SUR, RAD, ANES
St. Mary's Hospital (RMC)	OBG
West Palm Hospital (RMC)	SUR, RAD, ANES

Existing *ambulatory teaching sites* where medical students take one or more required clerkships, which have capacity for expansion.

Facility Name (Campus)	Required Clerkships
University Hospital Clinics (Miami)	SUR, OBG, PSY, PED, GERI
Community Hospital Clinics (Miami)	SUR, MED, OBG, PSY, PED, EMED, NEUR
Health Centers (Miami)	MED
Private Physician Offices (Miami)	FM, MED, OBG, PSY
Rural Clinic/AHEC (Miami)	FM
VA Clinic (Miami)	SUR, MED, PSY, GERI, NEUR
School Clinic (Miami)	PED

Pediatric Mobile Clinic (Miami)	PED
University Clinics (Boca-RMC)	FM
Community Hospital Clinics (RMC)	PBH, OBG, GERI
VA Clinic (RMC)	GERI, PSY
Health Centers (RMC)	PBH, PSY
Private Physician Offices (RMC)	MED, SUR, OBG, PED, FM, PSY, NEUR
Bethesda Memorial Hospice Center (RMC)	GERI
Holy Cross Urgent Care Center (RMC)	EMED

Key:

RMC	Regional Medical Campus	NEUR	Neurology
MED	Internal Medicine	RAD	Radiology
SUR	Surgery	GERI	Geriatrics
OBG	Obstetrics and Gynecology	FM	Family Medicine
PSY	Psychiatry	PBH	Public Health
PED	Pediatrics	EMED	Emergency Medicine
ANES	Anesthesiology		

Information Technology

The NextGenMD curriculum will employ new educational technology and learning platforms in addition to continuing to use Blackboard, the learning management system supported by the University of Miami. The Miller School has already been utilizing Medtrics for curriculum management and database. NextGenMD will expand its use of Medtrics for student assessment, course management and scheduling in addition to student portfolios. The Miller School had also been using the Osmosis platform as a companion for online videos, self-assessment questions, and a student performance dashboard in selected pre-clerkship courses/modules. NextGenMD will expand the use of Osmosis for courses/modules throughout all 3 Phases. Domain and Discipline directors in addition to other faculty content experts will work with the Osmosis team to update content videos in addition to self-assessment questions.

During the clerkship year, no additional IT support will be required. All clinical sites utilize electronic health records and have high-speed Internet to which all students have access. Each of the hospital sites offers access to computers with Internet access and online educational resources. University of Miami students on clinical rotations have access to all Calder Medical Library electronic resources. Each of the hospital sites offers access to on-site medical libraries, which can also be used by students as study space. Both guest and secure wireless networks are available throughout the Medical Campus in public spaces as well as classrooms, labs, offices, lounges, and clinical spaces. Faculty and students at the Miller School are supported by a group of eight IT staff members who are not shared with another school or college. These Medical Education IT staff address specific educational needs such as recording lectures, running servers that support medical education functions, updating classroom technology, and creating new online educational materials. In addition to their normal duties, this group works with faculty to explore new technologies, services, and pedagogical techniques that can enrich the medical education experience. The Medical Education IT staff are connected to the larger University of Miami IT department so they can leverage the staffing and specialized skills of the broader IT organization for needs such as server security, desktop support, instructional design, learning space design, and network connectivity.

Educational Space

The NextGenMD curriculum in Phases 1 and 2 will require the use of small group and large group teaching rooms for self-directed case-based inquiry and guided case-based collaborative learning through case-based learning and team-based learning formats. Prior to AY2019-20, an additional 7 small group teaching rooms were built at the Calder Medical Library bringing the total small group teaching rooms to 31. To accommodate team-based learning in larger groups, the Dean has re-allocated six departmental teaching spaces to be used for the NextGenMD curriculum; all of these departmental classrooms can be configured for team-based learning, have been updated with the latest audiovisual technology, and are in close proximity to the Rosenstiel Medical Sciences Building. The table below outlines current and new teaching spaces (in bold).

NextGenMD Teaching Space

Room Type/Purpose	# of Rooms of this size/type	Seating capacity (provide a range if variable across rooms)	Building(s) where rooms are located
Lecture Halls	2	160	Rosenstiel Medical Sciences Building
Lecture Hall	1	88	Rosenstiel Medical Science Building
Lecture Hall	1	80	Gordon Center for Research in Medical Education
Lecture Hall	1	200	Anne Bates Leach Eye Hospital
Lecture Hall	1	100	Lois Pope Building
Computer Lab	1	40	Rosenstiel Medical Science Building
Computer Lab	1	30	Gordon Center for Research in Medical Education
Computer Lab	1	9-32	Calder Medical Library
Learning Labs	12	22	Rosenstiel Medical Science Building
Anatomy Labs	6	30	Rosenstiel Medical Science Building
Conference Rooms	5	10-60	Rosenstiel Medical Science Building
Classrooms	3	23-60	Gordon Center for Research in Medical Education
Classrooms	6	10-50	Mailman Center
Small Group Rooms	12	10	Rosenstiel Medical Science Building
Small Group Rooms	7	10	Calder Medical Library

Standardized Patient Exam Rooms	6	3	Gordon Center for Research in Medical Education
Simulation Lab	1	6-12	Center for Patient Safety
Training/Simulation Labs	3	25-30	Gordon Center for Research in Medical Education
Large Group Room	1	50	Rosenstiel Medical Science Building 2nd Floor (Dermatology Conference Room)
Large Group Room	1	50	Rosenstiel Medical Science Building 3rd Floor (Microbiology/Immunology Podack Classroom)
Large Group Room	1	50	Rosenstiel Medical Science Building 6th Floor (Pharmacology Classroom)
Large Group Room	1	50	Bachelor Children’s Research Institute 5th Floor Classroom
Large Group Room	1	50	R. Bunn Gautier Building 1st Floor (Biochemistry and Molecular Biology Classroom)
Large Group Room	1	40	Rosenstiel Medical Science Building 8th Floor (Minimally Invasive Surgical Classroom)

Funding for the NextGenMD and Legacy Curricula

In order to support the elements of the NextGenMD curriculum described above, additional dollar support for faculty effort in a variety of different areas will be required. We estimate that a total cost for Phase 1 of the curriculum as outlined will approximate \$6,815,167. This is in contrast with the current spending for Year 1 of the MD and MD/MPH Program at our School, which approximates \$3,332,208. Thus the incremental cost for the first year of the NextGenMD curriculum will approximate \$3,482,959. During this first year, the second year in the Legacy curriculum will continue with similar faculty effort as at present at an approximate cost of \$2,543,569. Note that during the second year of the NextGenMD curriculum this cost for the second year of the Legacy curriculum will disappear.

Phase 2 of the NextGenMD curriculum, the clerkship year that comprises 12 months, overlaps with the third year of the Legacy curriculum for 8 of those 12 months, so total number of students on integrated clerkship rotations will increase from 200 to 400 as outlined above. The increased cost for this clinical “bulge” with two classes engaged in clerkship rotation for 8 of the 12 months will require an additional \$4,501,802. Simultaneously the Legacy third and fourth year activities will continue at their current level of support.

Phase 3 of the NextGenMD curriculum will be focused heavily on scholarly concentration activities for approximately one half of the class (research programs and capstone projects) while the other half pursue either dual degrees or early transition to residency. The estimated cost for Phase 3 will be \$2,555,067 in the first year and then \$4,624,467 when fully implemented.

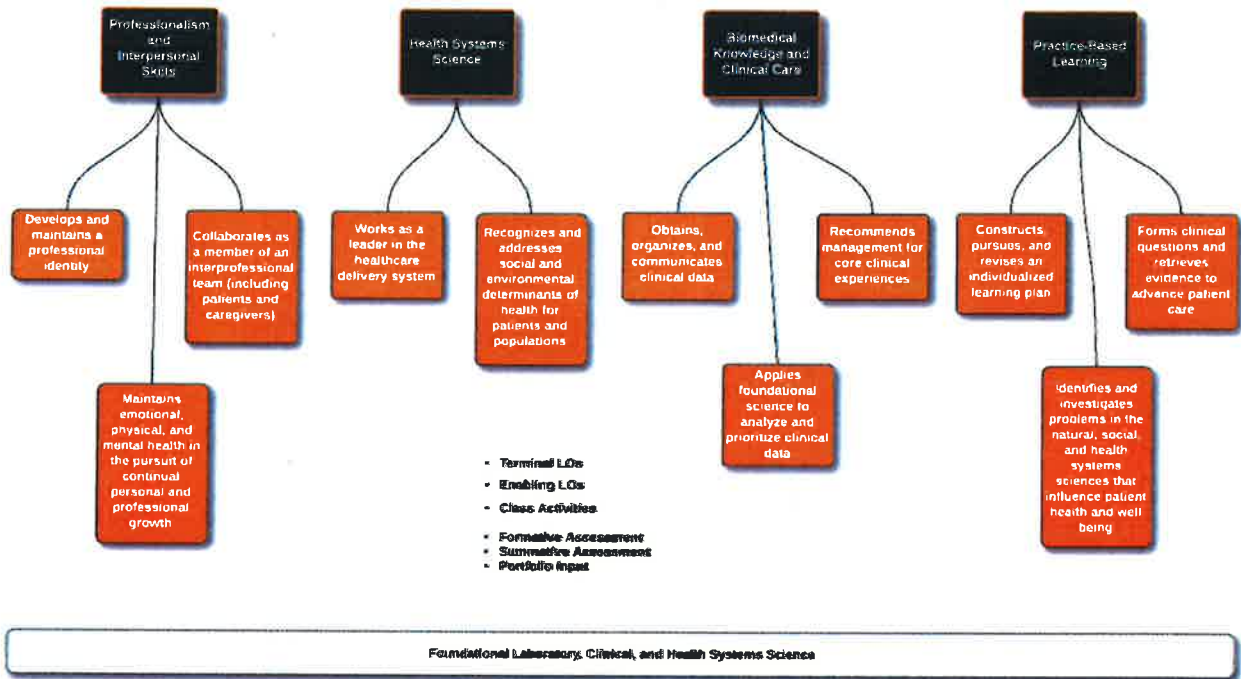
Once in steady-state, the NextGenMD curriculum will represent an incremental investment by the Miller School of Medicine of \$4,956,363 compared to the current cost of the curriculum in 2020 dollars. We have a firm commitment for the total dollars to support the roll out of Phase 1 of the NextGenMD curriculum and the maintenance of the Legacy curriculum going forward. Sources of support will include tuition revenue, institutional and endowed scholarships dollars, and direct support from the University of Miami Health System (UHealth). This activity and this level of support has the strong prior approval of the President of the University of Miami, the Chairperson of the Board of Trustees of the University of Miami, the CEO of the University of Miami Health System, and the Dean and Chief Academic Officer of the Miller School of Medicine.

	FY'20	FY'21	FY'22	FY'23	FY'24
Legacy Curriculum (cost to run full 4-year curriculum)	\$ 12,420,601	\$ 12,420,601	\$ 12,437,926	\$ 12,446,514	\$ 12,457,501
Cost to Teach Two Curriculums over Next 5 Years:					
Legacy	12,420,601	9,088,393	5,355,081	489,327	-
NextGenMD	1,294,000	6,815,167	11,584,647	16,211,901	17,413,864
Sub-Total: Cost by Year to Teach Two Curriculums	\$ 13,714,601	\$ 15,903,559	\$ 16,939,728	\$ 16,701,227	\$ 17,413,864
Incremental Investment	\$ 1,294,000	\$ 3,482,959	\$ 4,501,802	\$ 4,254,714	\$ 4,956,363

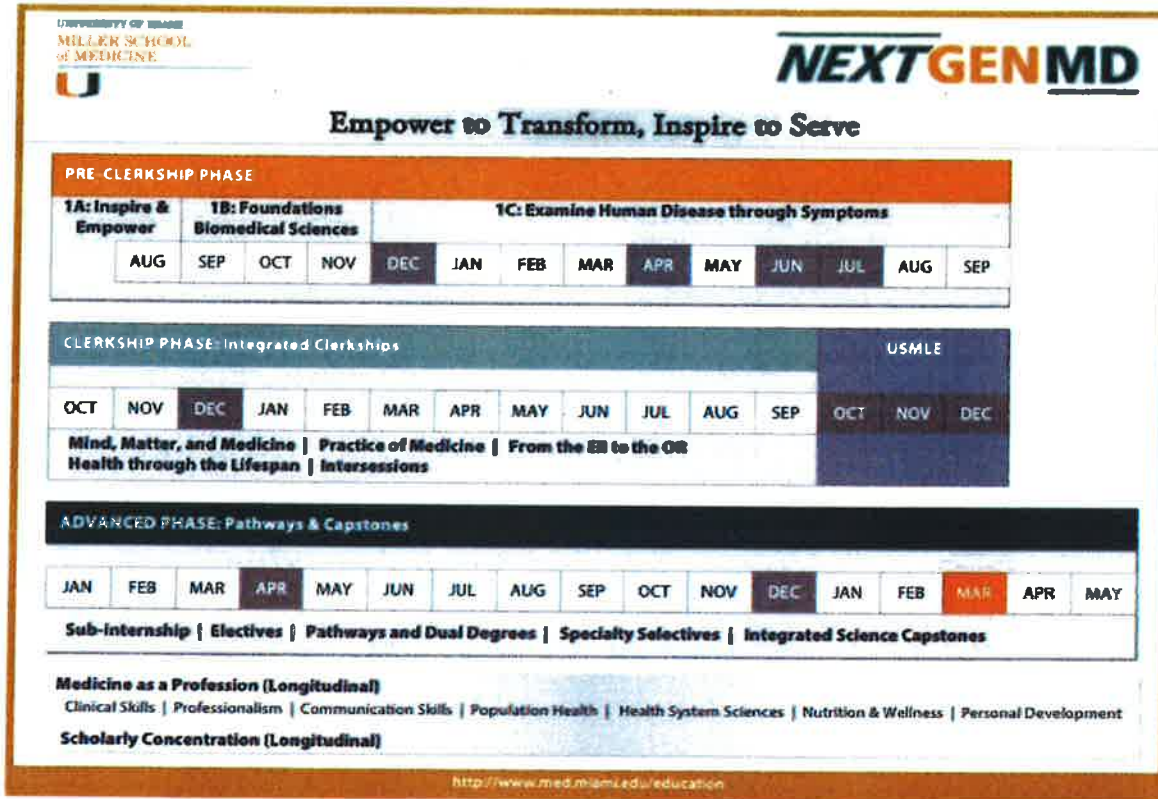
Appendix 1 (NextGenMD Program Goals)



Empower to Transform, Inspire to Serve



Appendix 2 (Curriculum Schematic of NextGenMD)



Appendix 3 (Schematic of Weekly Schedules in Phases 1b and 1c)

Phase 1B Schedule

	Friday	Weekend	Monday	Tuesday	Wednesday	Thursday	Friday	Weekend
8:00								
8:30			Guided Case-based Learning A1 5 groups of 40 Discussion of answers and related questions	Facilitator Office Hours		Guided Case-based Learning B3 5 groups of 40 Discussion of answers and related questions	Assessment low stakes 10 straightforward MCQs	
9:00	Self Directed Case-based Inquiry A.1 5 groups of 40 Students provided with case (5-7 sentences) Develop evidence based questions (Identify 3 objectives) 3 easy MCQs for each team	Self-Regulated Learning Readings, videos, additional resources Students complete IRAT** (10 MCQs)	Correlates Just-in-time delivery of anatomy and clinical tests; basic science problem; mini cases 100 students	Self Directed Case-based Inquiry B1 5 groups of 40 Students provided with case (5-7 sentences) Develop evidence based questions (Identify 3 objectives) 3 easy MCQs for each team	Self-Regulated Learning Readings, videos, additional resources Students complete IRAT (10 MCQs)	Correlates Just-in-time delivery of anatomy and clinical tests; basic science problem; mini cases 100 students	Self Directed Case-based Inquiry C1 5 groups of 40 Students provided with case (5-7 sentences) Develop evidence based questions (Identify 3 objectives) 3 easy MCQs for each team	Self-Regulated Learning Readings, videos, additional resources Students complete IRAT** (10 MCQs)
9:30								
10:00								
10:30	Self-Regulated Learning		Self-Study	Self-Regulated learning		Self-Study	Self-Regulated learning	2nd part of the case is released and/or Questions for the gDQ is released upon completion of the IRAT 5 hours
11:00	Guided Case-based Learning A2 5 groups of 40		Correlates Just-in-time delivery of anatomy and clinical tests; basic science problem; mini cases 100 students					
11:30	*gDQ- 3 complex open ended questions and group assessment Discussion of answers and related MCQs		Self-Study	Guided Case-based Learning B2 5 groups of 40 *gDQ- 3 complex open ended questions and group assessment Discussion of answers and related MCQs		Wrap up Case A	Guided Case-based Learning C2 5 groups of 40 *gDQ- 3 complex open ended questions and group assessment Discussion of answers and related MCQs	
12:00						Wrap up Case B		

*gDQ- Group Discussion Questions- group discussion followed by a group assessment

** IRAT- Individual Readiness Assessment

	Friday	Weekend	Monday	Tuesday	Wednesday	Thursday	Friday	Weekend
8:00								
8:30			<p>Guided Case-based Learning A3 5 groups of 40</p> <p>gDQ - 6 complex questions</p> <p>Discussion of answers and related questions</p>	<p>Facilitator Office Hours</p>		<p>Guided Case-based Learning B3 5 groups of 40</p> <p>gDQ - 6 complex questions</p> <p>Discussion of answers and related questions</p>	<p>Assessment low stakes 10 straightforward MCQs</p>	
9:00	<p>Self Directed Case-based Inquiry A.1 5 groups of 40</p> <p>Students provided with case (5-7 sentences)</p> <p>Develop evidence based questions Identify 3 objectives 3 easy MCQs for each team</p>	<p>Self-Regulated Learning Readings, videos, additional resources</p> <p>Students complete IRAT** (10 MCQs)</p> <p>2nd part of the case is released and/or Questions for the gDQ is released upon completion of the IRAT</p> <p>5 hours</p>	<p>Correlates Mini cases, patient panels, just in time delivery of science problems</p> <p>100 students</p>	<p>Self Directed Case-based Inquiry B1 5 groups of 40</p> <p>Students provided with case (5-7 sentences)</p> <p>Develop evidence based questions Identify 3 objectives 3 easy MCQs for each team</p>	<p>Self-Regulated Learning Readings, videos, additional resources</p> <p>Students complete IRAT (10 MCQs)</p> <p>2nd part of the case is released and/or Questions for the gDQ is released upon completion of the IRAT</p> <p>5 hours</p>	<p>Correlates Mini cases, patient panels, just in time delivery of science problems</p> <p>100 students</p>	<p>Self Directed Case-based Inquiry C1 5 groups of 40</p> <p>Students provided with case (5-7 sentences)</p> <p>Develop evidence based questions Identify 3 objectives 3 easy MCQs for each team</p>	<p>Self-Regulated Learning Readings, videos, additional resources</p> <p>Students complete IRAT** (10 MCQs)</p> <p>2nd part of the case is released and/or Questions for the gDQ is released upon completion of the IRAT</p> <p>5 hours</p>
9:30								
10:00	<p>Self-Regulated Learning</p>		<p>Self-Study</p>	<p>Self-Regulated Learning</p>	<p>Self-Regulated Learning</p>	<p>Self-Regulated Learning</p>	<p>Self-Regulated Learning</p>	
10:30			<p>Correlates Mini cases, patient panels, just in time delivery of science problems</p> <p>100 students</p>	<p>Self-Regulated Learning</p>	<p>Correlates Mini cases, patient panels, just in time delivery of science problems</p> <p>100 students</p>	<p>Self-Regulated Learning</p>	<p>Self-Regulated Learning</p>	
11:00	<p>Guided Case-based Learning A.2 5 groups of 40</p> <p>*gDQ- 3 complex open ended questions and group assessment</p> <p>Discussion of answers and related MCQs</p>		<p>Wrap up Case A</p>	<p>Guided Case-based Learning B2 5 groups of 40</p> <p>*gDQ- 3 complex open ended questions and group assessment</p> <p>Discussion of answers and related MCQs</p>		<p>Wrap up Case B</p>	<p>Guided Case-based Learning C2 5 groups of 40</p> <p>*gDQ- 3 complex open ended questions and group assessment</p> <p>Discussion of answers and related MCQs</p>	
11:30								
12:00								

*gDQ- Group Discussion Questions- group discussion followed by a group assessment

** IRAT- Individual Readiness Assessment

1B and 1C PM Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
1:00	Phase 1b: EMT Lite Phase 1c: preceptor	Clinical Skills, Standardized Patients (CS/SP)	Self-Regulated Learning (SRL)	Scholarly Concentration (SC)	Self-Regulated Learning (SRL)
1:30		Medicine as a Profession longitudinal theme (MAP)			
2:00					
2:30					
3:00					
3:30					
4:00					
4:30					

Wednesday is Self-Regulated Learning for everyone. On M/T/R/F, 50 of the 200 students are in ECE, CS/SP/MAP, SC, or the 2nd SRL. This diagram represents a typical week from the student perspective but each thread is running throughout the week.