**Distinction in Medical Research** (DMR) Information session 12-12:30 pm. October 28, 2021 (Class of 2024) Zoom https://ttuhsc.zoom.us/j/91215865095 12-12:30 pm. November 10, 2021 (Class of 2025) **Zoom** https://ttuhsc.zoom.us/j/93158439813 Leslie Shen, PhD, CCRP Associate Dean for Research, Professor of Pathology, SOM leslie.shen@ttuhsc.edu Phone: (806) 743-2815 HSC Room 1A096B

#### Goals of DMR

The Distinction in Medical Research (DMR) program is designed to provide medical students a <u>structured medical research experience</u>.

An experience in which the student not only plans, conducts, and presents a cutting-edge medical research project, but is instructed in research method development, research management, and other critical skills.

This structured experience will empower the student to become engaged in research during medical residency and as they continue on in their medical practice.

#### Results of DMR survey: MS1 and MS2



No

Maybe

Yes

Q2 - Are you interested in participating in the DMR, beginning with MSSRP Summer

2022?





#### **Percent Interest in Research Fields**



### **Objectives of DMR**

- Construct hypothesis driven research
- Prepare research design for basic science research
- Prepare study protocols for clinical studies
- Draft research proposals, abstracts, and manuscripts
- Know regulations required to conduct research

## DMR Curriculum

Provides fundamental knowledge of medical research without the time commitment of a master degree program and with the benefits of being self-paced

- Core Curriculum:
  - <u>PART I:</u> self-paced online courses (Course 1: *Research Methods*; Course 2: *Proposal Development and Research Management*): All DMR lectures are prerecorded lectures via zoom and <u>available to the students via links</u> on Sakai.
  - <u>PART II</u>: covers scholarly activities such as research proposals and abstract writing
- Average completion time: 3-4 years

#### DMR Timeline (Class of 2024)

Activities	MS <mark>1</mark>	MS <mark>2</mark>	MS <mark>3</mark>	MS <mark>4</mark>
DMR Application Deadline: December 1 <sup>st</sup> 2021		Х		
Introduction to Research (elective)	Optional			
(Req A) Medical Student Summer Research Program OR research activities approved by SOM Associate Dean for Research	х			
Y2 Medical Student Research (Fall MS2-Spring MS2)		Optional		
(Req <b>B</b> ) Course 1: Research Methods <mark>due MS3 (Sep 1<sup>st</sup> 2022)</mark>			Х	
(Req <b>C</b> ) Course 2: Proposal Development/Research Management due MS3 (Sep 1 <sup>st</sup> 2022)		x	x	
(Req D) Student Group Discussion 75% attendance		X (Spring)	x	х
(Req E) Conduct research project(s)	X	X	X	X
(Req F) Submit abstract and present oral/poster as the first or co-first author at one (1) Student Research Week due by MS4 (Feb 28 <sup>th</sup> , 2024)		O (Spring)	O (Spring)	O (Spring)
(Req G) Research Proposal Submission due by MS3 (Dec 1 <sup>st</sup> , 2022)		X	X	
(Req H) Submit abstract and present oral/poster as the first or co-first author at one (1) national conference due by MS4 (Feb 28 <sup>th</sup> , 2024)	0	0	0	0
(Req I) Participate in one (1) Manuscript Submission due by MS4 (Feb 28 <sup>th</sup> , 2024)	0	0	0	0

**X**: Mandatory completion dates

**O**: Flexible fulfillment throughout medical school years

#### DMR Timeline (Class of 2025)

Activities	MS <mark>1</mark>	MS <mark>2</mark>	MS <mark>3</mark>	MS <mark>4</mark>
DMR Application Deadline: October 1 <sup>st</sup> 2022		X		
Introduction to Research (elective)	Optional			
(Req A) Medical Student Summer Research Program	X			
Y2 Medical Student Research (Fall MS2-Spring MS2)		Optional		
(Req <b>B</b> ) Course 1: Research Methods <mark>due by end of MSSRP (July 31<sup>st</sup> 2022)</mark>	X	X		
(Req <b>C</b> ) Course 2: Proposal Development/Research Management <mark>due by MS3 (Sep 1<sup>st</sup> 2023)</mark>		x	x	
(Req D) Student Group Discussion 75% attendance		X (Spring)	x	x
(Req E) Conduct research project(s)	X	X	X	х
(Req <b>F</b> ) Submit abstract and present oral/poster as the first or co-first author at one (1) Student Research Week due by MS4 (Feb 28 <sup>th</sup> , 2025)		O (Spring)	O (Spring)	O (Spring)
(Req <b>G</b> ) Research Proposal Submission due by MS3 (Dec 1 <sup>st</sup> , 2023)		X	Х	
(Req H) Submit abstract and present oral/poster as the first or co-first author at one (1) national conference due by MS4 (Feb 28 <sup>th</sup> , 2025)	0	0	0	0
(Req I) Participate in one (1) Manuscript Submission due by MS4 (Feb 28 <sup>th</sup> , 2025)	0	0	0	0

X: Mandatory completion dates

**O**: Flexible fulfillment throughout medical school years

Medical Student Summer Research Program (MSSRP) Req A

#### Part I: Course 1 Research Methods

- Use eRaider account to login <u>Sakai under DMR</u>.
- Req **B**: Finish on-line course (30-60 min/session, a total of 8 hours lectures)
  - $\odot$  How to conduct medical research literature
  - $\odot$  How to conduct retrospective chart review research using UMC EMR
  - How to formulate research questions and design a hypothesis-driven research study (basic science studies and clinical trials)
  - $\odot$  How to write study protocol for a basic science study and a clinical trial
  - $\odot$  Basic biostatistical analysis and preparation for statistical consultation
  - $\odot$  How to conduct a case-control study, a retrospective study, and a clinical trial
  - $\odot$  How to prepare an abstract for a scientific meeting
  - $\odot$  How to prepare and present an oral or poster presentation at a scientific meeting
- Complete brief questions after each lecture to document participation

#### Part I: Course 2

#### **Proposal Development and Research Management**

- Use eRaider account to login <u>Sakai under DMR</u>.
- Req C: Finish on-line course (30-60 min/session, a total of 8 hours lectures)
  - $\odot$  How to write a research proposal for basic science study
  - $\odot$  How to write a research proposal for clinical trial
  - $\odot$  Advanced biostatistical analysis and data management
  - $\circ$  Research misconduct
  - $\odot$  How to write basic science manuscript and select a journal for publication
  - $\odot$  How to write case control and retrospective study manuscript and select a journal for publication
  - $\odot$  How to write a clinical manuscript and select a journal for publication
- Complete brief questions after each lecture to document participation

#### Part II: Scholarly activities

- Req D: Participating in DMR student group sessions: 2 sessions/semester via zoom. 75% attendance of total session
- Req E: Conducting research project(s)
- Req F: Submitting at least one <u>abstract</u> as the first or co-first author and presenting the work for <u>Student Research Week</u>. <u>due by MS4 (Feb 28<sup>th</sup>)</u>
- Req G: Submitting a 5-page <u>research proposal</u>. DMR committee will review for comments to address before approval. <u>Due by MS3 (Dec 1<sup>st</sup>)</u>
- Req H: Submitting at least one <u>abstract</u> as the first or co-first author and presenting the work at a <u>State/National Conference</u>. <u>Due by MS4 (Feb</u> <u>28<sup>th</sup>)</u>
- Req I: <u>Participating in a manuscript submission</u>: needs to be at least a coauthor in manuscript to show the significant contribution for peerreferred journal submission/publication. <u>Due MS4 (Feb 28<sup>th</sup>)</u>

### Who should apply? How to apply?

WHO: Those who wish to acquire these skills as part of their educational component. Students who need flexible schedules.

**HOW:** Requirements for application:

- (1) Medical student transcripts from MS1 Fall and MS1 Spring,
- (2) Letter of support from faculty mentor, and
- (3) Specific Aims (1 Page, NIH format) approved by faculty mentor. Reviewed by committee panel for acceptance.

Application Deadlines: December 1st, 2021 for Class of 2024. October 1<sup>st</sup>, 2022 for Class 2025.

DMR website: Under https://www.ttuhsc.edu/medicine/student-resources.aspx

 Questions should be directed to Jacob Lovett <u>Jacob.Lovett@ttuhsc.edu</u> or Dr. Shen <u>Leslie.Shen@ttuhsc.edu</u>

### DMR at a glance

- Estimated completion time: 3-4 years
- Lectures (virtual)
- Opportunity to increase skills and knowledge in clinical research
- No thesis requirements
- Plans of research study are created on a case-by-case basis and customized for each student
- Expert faculty tapped for lecturing and mentoring
- Resourceful research environment
- Interactive peer group discussion
- Practice composing study protocols and grant proposals for medical research
- Apply basic, clinical, community health, and health service research concepts to improve patient outcomes
- <u>No charge to TTUHSC SOM students</u>

# Can we continue our MSSRP research as our DMR project? Can we start new projects?

- Yes
- However, not all MSSRP projects will be appropriate to continue building for the next few years
- There will be plenty of time to begin a new project that meets all requirements, whether it is necessary or if you wish to pursue new research

# For class of 2024 only, who did not participate in the Summer Research Program:

- Substituting the MSSRP requirement with a research program at another institution will be evaluated on an individual basis
- For Class of 2025 and beyond participation in the MSSRP is required

# For Class of 2024 only, can prior research count towards DMR requirements?

• Eligibility of past work is approved on an individual basis