Dr. Kathyrn Andolsek
Executive Director, Duke MBS
Assistant Dean, Premedical Education
Master of Biomedical Sciences

The Duke University School of Medicine announces an innovative one-year professional master's degree, the Master of Biomedical Sciences (MBS). The goal of this program is to enhance the scientific and professional preparation of students aspiring to a career in the health professions or in a related field requiring graduate level biomedical sciences. Students will bolster their preparation for further study or entry into the biomedical workforce by completing a rigorous combination of multidisciplinary graduate level coursework, immersive patient-centered service learning, individualized electives, advising, and professional development.

Distinguishing features of Duke's MBS program:

- Located within the Duke University School of Medicine in the heart of a major academic medical center that includes the Duke University Hospital, the Duke Medicine Pavilion, Duke Clinics, Duke Cancer Center, and the Duke Clinical Research Institute;
- Graduate level coursework in the human biological sciences designed specifically for and dedicated to MBS students;
- Emergency Medical Technician (EMT) training, certification, and experience. MBS students will be members of an interprofessional health care team, not shadows or observers;
- Gross anatomy course with cadaveric dissection that is integrated with the EMT curriculum and revisited during other core courses;
- Team-based learning and small group seminars focusing on communication, teamwork, professional formation, ethics;
- Instruction, advising, and mentoring by faculty leaders in Duke's highly rated

[https://medschool.duke.edu/mbs](https://medschool.duke.edu/mbs)
What do you want to do with your life?
What’s your next step?
Duke Master of Biomedical Sciences

- Integrated core curriculum
- Biological sciences & medical humanities
  - Cadaveric dissection
- Housed in Duke School of Medicine
- EMT
- Advising; student peer mentoring; learning specialist
- Support for a “postbacc postbacc” (i.e. “the gap year after next”)
- Team-based learning
- GPA 3.2  MCAT/GRE/DAT not required
- Additional information regarding eligibility criteria and financial aid are at our web site.

https://medschool.duke.edu/mbs
# CURRICULUM

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Human Structure

Course Highlights:
Functional anatomy
Human cadaveric dissections
Integrates basic sciences & clinical correlations

Meets 3 days a week for 8 weeks
Lecture/Research Seminar/Team Based Learning
Full cadaver lab each day

Exams
Lab Practicals & Written Exams

Integrated Team-Based Event (Fridays)
Integrated team-based learning events
Bring together faculty & concepts from all courses

This keystone course functions as a graduate-level anatomy course. Students do a full dissection and also are involved in graduate seminars on a weekly basis. This course will prepare students for health professional programs or the pursuit of a PhD.

Daniel Schmitt  
(PhD. Stony Brook U.)

Angel Zeininger  
(PhD. U. of Texas)

Roxanne Larsen  
(PhD. Texas Tech.)

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Dr. Joseph Jackson
MBS Associate Director
Vice Chief of Education
Duke Children’s Primary Care

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HPPD

Essentials of HealthCare Practice and Professional Development

• This **longitudinal course** is designed to enhance understanding of the **meaning of illness** and the development of **personal identity** and **professional formation** in the aspiring health professional.

• The course stresses **active learning** in a supportive large and small group environment.

• Opportunities to cultivate insight and self-awareness, effective **verbal and written communication**, cultural humility, **self-reflection** and practice giving and receiving feedback.

• Opportunities to **explore career alternatives** and to practice teamwork and interviewing skills
Health & Arts @ the Nasher Museum

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Reflective Practice
Evidence Based Clinical Practice

“the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient... integrating individual clinical expertise with the best available external clinical evidence from systematic research.”

-David Sackett
EBCP

Evidence Based Clinical Practice

- Emphasizes the introductory skills for searching, critically reading and interpreting the medical literature
- Emphasis on the communication strategies both before and after clinical trials are published
  - Opportunities to learn how to construct appropriate clinical questions
  - Discover how to research and answer questions from a patient & provider perspective
- Large group, small group, expert panels and team based learning modules
Scholars Day Presentation

[Image of a poster presentation]

Duke University School of Medicine
Master of Biomedical Sciences Program

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Jamie Wood, PhD
MBS Course Director for Cellular Sciences
Assistant Professor of the Practice in Medical Education
Cellular Sciences

• Fall Semester
• Course topics include:
  • Genetics
  • Cell Biology
  • Biochemistry
  • Histology
  • Immunology
• Team based learning and Flipped Classroom

Neurons from rat hippocampus
Image courtesy
https://www.mcb.harvard.edu/faculty/research-gallery/
Samuel Francis, MD
MBS Course Director for Enhancement EMT-Basic Training
Assistant Professor in Emergency Medicine
EMT

Fall Semester
• Training & Certification as EMT Basic
• Simulation
• Beginning Clinicals
  • Person County EMS
  • Duke Emergency Dept.
  • Duke Urgent Care
• Shift feedback from RNs, PAs, NPs, Techs, etc.

Spring Semester
• Clinicals
• Simulations
Medical Statistics

... become a critical consumer of the medical literature.

- Identify study designs in medical research
- Describe different types of data
- Perform basic descriptive statistics
- Use common statistical methods appropriately
- Use the software package JMP for analysis
- Calculate sample size and power
- Analyze data for research project

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Matthew Velkey, PhD
MBS Course Director for System Sciences
Assistant Dean for Basic Science Education
Assistant Professor of the Practice for Cell Biology
Organ Systems

- Spring Semester
- Course topics include:
  - Physiology
  - Histology
  - Embryology
  - Pathology
  - Neuroscience
- Team based learning and Flipped Classroom

Adult urinary system Image courtesy

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Don Bradley, MD
MBS Course Director for Health Systems
Associate Consulting Professor, Department of Family Medicine
Health Systems

- Spring Semester
- Course topics include:
  - Medicare/Medicaid
  - Quality
  - Population Health
- Skills Development:
  - Project management
  - Presentation skills
  - Negotiation
  - Team work
  - Community engagement
- Projects
  - Community Health Needs Assessment
  - Health Policy Brief

https://medschool.duke.edu/mbs
Leonor Corsino, MD, MHS, FACE
Associate Director
Master of Biomedical Science Program
Selective Coordinator
INTRODUCTION

• The Selective curriculum accounts for a total of 4 credits of the 38 credits required for the degree and will be completed during the spring semester.

• Elective selection will be carefully crafted with the help of the student’s advisor.

• Students are strongly encouraged to take the following electives:
  - Planning for Health Professions Education (2 credits)
Meet with advisor
By the end of September

Complete selective forms-register online for those courses within the MBS program. To register for courses outside the program the form will need to be submitted to Jeremy in order to go to the register office. Due date to be determined.

Complete all necessary course work for selective before the start date. e.g. modules is doing DOCR or Community engagement
Before first day of spring semester
Maureen D. Cullins, AM
Associate Director & Sr. Advisor
Master of Biomedical Sciences Program
Co-Director, Multicultural Resource Center
MBS Advising Program

• The Master of Biomedical Advising Team:
  • Assigned Advisors
    • Leonor Corsino, MD, MHS
    • Maureen Cullins, AM
    • Joseph Jackson, MD
    • Leonard White, PhD
  • Learning Strategist
    • Melanie Bonner, PhD
  • Faculty Advisors
    • All MBS Teaching Faculty
  • Professional Advising/Career Advising
    • Office of Pre-health Advising

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MBS Advising Program

- **Academic Advising**
  - Faculty, Course Directors

- **Pre-professional Advising**
  - Advising Team

- **Support Services**
  - Learning Strategist
  - Academic Skills Center
  - Student Affairs (CAPS, Career Center, Women’s Center, Center for Gender and Sexual Diversity, DCMA, Religious Life, etc.)
  - Student Health
Duke Master of Biomedical Sciences (MBS)

The Duke University School of Medicine offers an innovative one-year professional master's degree, the Master of Biomedical Sciences (MBS). The Master of Biomedical Sciences is a full-time one-year master's degree program that prepares students to be highly competitive candidates for medicine, related health professions, and other biomedical careers. The curriculum integrates graduate-level human biomedical sciences with skill development in critical thinking, communication, and teamwork.

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