

A woman with dark hair, wearing a white lab coat and a black face mask with "JANU" written on it, is looking through the eyepiece of a white Nikon microscope. The background is a soft, out-of-focus laboratory setting. The image has a purple gradient overlay.

DES MOINES
UNIVERSITY
MEDICINE & HEALTH SCIENCES

MASTER OF SCIENCE IN
BIOMEDICAL SCIENCES

FOCUSED ON YOU AND YOUR GOALS

Des Moines University's Master of Science in Biomedical Sciences Program **immerses students in research that generates knowledge and new solutions to benefit the health of people around the world.** The program matches individuals with a passion for science with mentor-investigators who help prepare them for careers in a wide variety of fields, including academia, biotechnology, pharmaceuticals and government. Graduates go on to graduate health sciences careers and as advanced technicians, laboratory managers, educators, scientists and other roles.

The **two-year M.S.B.S. program** offers opportunities for research in biochemistry, microbiology, pharmacology, physiology and pathology. Students are required to complete a **total of 46.5 credit hours** – 22 credit hours in the classroom and 24.5 credit hours of bench research and a thesis. M.S.B.S. students also gain rich and rigorous experience in presenting their research.

ADVANTAGES OF A DMU M.S.B.S. DEGREE

- ✓ comprehensive knowledge of the scientific process
- ✓ highly developed critical thinking and analytical skills
- ✓ ability to take courses with medical students during the first year
- ✓ close interaction with classmates and expert faculty
- ✓ in-depth opportunities for hands-on research
- ✓ state-of-the-art facilities
- ✓ excellent preparation for careers and professional programs

LEARN FROM THE BEST

The DMU faculty are excellent educators who are committed to student success. They have diverse interests and areas of expertise. Every student has an assigned faculty advisor, but **all faculty have “open doors” for students’ questions and conversations.** The relatively small size of the program means you will benefit from the personal attention, scientific knowledge and professional guidance of these educator-scholars.

Areas in which faculty have expertise and conduct research include:

- Bacteriology, parasitology and virology
- Cancer
- Cardiovascular, renal and metabolic disease
- Depression, mood disorders and chronic pain
- Immunity and inflammation
- Molecular and cellular pharmacology
- Neuroscience
- Substance abuse
- Vascular biology



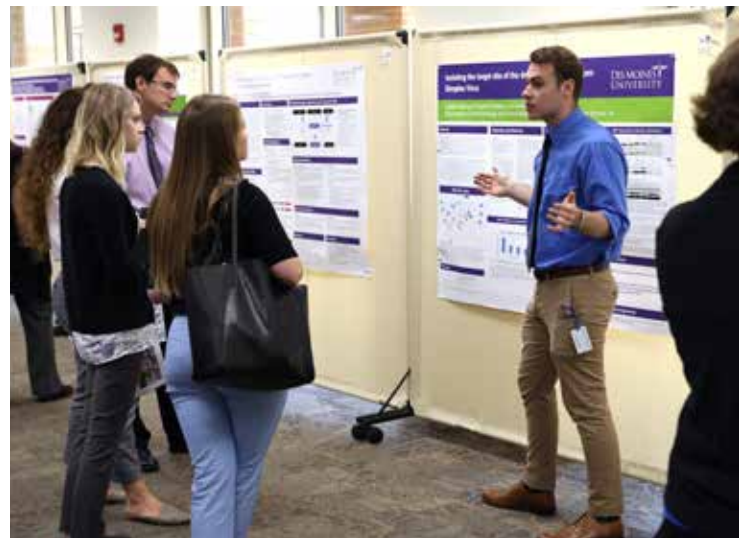


“The M.S.B.S. program provides incomparable learning opportunities that combine rigorous academic content with training, research and critical analysis.

You will learn from dedicated and inspiring teachers and researchers within a robust multidisciplinary environment.

Our graduates are prepared for successful careers in biomedical research and advanced clinical or graduate programs.”

Francesca Di Sole, Ph.D.,
Associate Professor and Director,
M.S.B.S. Program



MASTER OF SCIENCE IN BIOMEDICAL SCIENCES

	FALL TERM					SPRING TERM					SUMMER TERM	
	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
YEAR 1	ALL MSBS STUDENTS Biochemistry / Molecular Genetics (4.5 credits) Intro to Research (2 credits) Responsible Conduct Biomedical Research (1 credit) Frontiers in Biomedical Research A (1.5 credits) Research Compliance & Laboratory Safety (0.5 credit)					MICROBIOLOGY	Microbiology & Immunology (5.5 credits) Special Topics in Micro & Immunology (1.5 credits)				ALL MSBS STUDENTS Intro to Biostatistics & Data Analysis (2 credits) Research (2 credits) Thesis (1 credit)	
						PHYSIOLOGY/ PHARMACOLOGY	Medical Physiology (6 credits) Special Topics in Phys/Pharm (1 credit)					
						PATHOLOGY	Major Organ Physiology (3 credits) Immunology (1.5 credits) General Pathology (2.5 credits)					
						ALL MSBS STUDENTS	Frontiers in Biomedical Research B (1 credit) Research (1 credit)					
YEAR 2	ALL MSBS STUDENTS Presentation of Scientific Information (1 credit) Research (7 credits) Thesis (1 credit)					ALL MSBS STUDENTS Scientific Communications (1 credit) Research (6 credits) Thesis (2 credits)					ALL MSBS STUDENTS Thesis (5 credits)	

Courses are only offered in the term in which they are listed. Curriculum is subject to change.

ACADEMIC ADVANTAGES

The M.S.B.S. program is offered by DMU's College of Osteopathic Medicine; its **students take many of the courses in their first year with medical students.**

The program's didactic curriculum provides a translational experience by combining clinical course work with small group discussions in basic science.

M.S.B.S. students select a laboratory in the first year while completing the majority of their course work. In the second year, they focus primarily on conducting research and working on their thesis, which they are required to write and defend. For that

endeavor, each student has a committee of faculty members who provide support, guidance and critical review.

Given DMU's **highly engaging research environment**, students are members of research teams that often have their work published in scientific journals. Several University faculty have been recognized for their scholarship through grants including from the National Institutes of Health and the American Heart Association. M.S.B.S. students work with these faculty.

Students in the program also are provided with **financial support to present their research** at national conferences.

For students who want to become health

care providers, **the M.S.B.S. degree is a plus on applications for professional programs.** The program is directly relevant to human health, the prevention and treatment of disease and the advancement of health care and human safety.

The M.S.B.S. also is **available as a dual degree** for students in DMU's osteopathic and podiatric medical degree programs.

RIGOROUS, ENGAGING AND IN-DEPTH:
DMU'S M.S.B.S. PROGRAM WILL
PREPARE YOU FOR A REWARDING CAREER
OF INVESTIGATING QUESTIONS.

HOW TO APPLY:

Apply through the DMU direct application or through the Post Baccalaureate Centralized Application Service (PostBacCAS). Applications become available each year in August for the class that begins the following fall term. The application deadline is June 15; however, due to rolling admission, it is recommended to apply early.

M.S.B.S. PROGRAM ADMISSION REQUIREMENTS:

- ✓ **Bachelor's degree** from a regionally accredited college or university
- ✓ **Science and cumulative GPAs of 2.8** and higher are recommended
- ✓ **Completion of the following courses** prior to matriculation:
 - **Biology/Zoology** – 8 semester hours with lab
 - **General Chemistry** – 8 semester hours with lab
 - **Organic Chemistry** – 4 semester hours with lab
 - **Biochemistry** – 3 semester hours
 - **Physics** – 8 semester hours with lab (may substitute 3 semester hours of Statistics)
 - **English, English Composition, Speech or Literature** – 6 semester hours
- ✓ **Three letters of recommendation** from an employer, supervisor, academic advisor, professor or mentor
- ✓ **U.S. citizenship or legal permanent resident status** (copy of permanent resident card is required)
- ✓ Submission of an **MCAT, GRE or DAT score** through PostBacCAS is optional

DES MOINES UNIVERSITY

MEDICINE & HEALTH SCIENCES

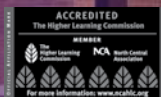
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515-271-1499

www.dmu.edu/admission

STATEMENT OF NONDISCRIMINATION: DMU is an Equal Opportunity/Affirmative Action institution and does not discriminate on the basis of race, color, gender, creed, national origin, age, disability, sexual orientation or marital status in employment, admission or access to education programs, activities or health care. Education programs within the University also have professional accreditation within their respective fields. Information about professional accreditation is available from the colleges and degree programs. ACCREDITATION: DMU's College of Osteopathic Medicine (COM) is accredited by the Commission on Osteopathic College Accreditation (COCA) of the American Osteopathic Association (AOA). As an accredited college, COM is a member of the American Association of Colleges of Osteopathic Medicine (AACOM). Des Moines University is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools, 230 South LaSalle St., Suite 7-500, Chicago, IL 60604; 312-263-0456; 800-621-7440; fax, 312-263-7462; www.hlcommission.org 11/20-500



BECAUSE OF WHERE YOU WANT TO GO AFTERWARD

Your ultimate goal is to become an exceptionally well-prepared health care and sciences professional. At DMU, you will learn with faculty and students who all share a common focus on medicine and the health sciences. You will become ready for both autonomous and interprofessional practice in medicine, research and the sciences.

As a student, you will enjoy the amenities and affordability of Iowa's capital, Des Moines. Learn all about the city at www.catchdesmoines.com.

