BIOMEDICAL RESEARCH, M.S. (NON-THESIS)

Program Description

The Biomedical Sciences and Clinical and Translational Sciences departments of the Joan C. Edwards School of Medicine offer the following degrees: Doctor of Philosophy (Ph.D.), M.D./Ph.D., and Master of Science (M.S.), both thesis and non-thesis.

The primary goal of the Biomedical Research (BMR) program is to use biomedical and translational research approaches to help reduce the numerous health disparities and improve the health of the population in West Virginia and central Appalachia. To do this, students will take an interdisciplinary approach with defined interests and special in-depth training in one of the following research areas of emphasis: Cardiovascular Disease; Cell Biology; Obesity and Related Diseases; Neurobiology and Addiction; and Toxicology and Environmental Health. These areas are designed to be flexible and research oriented in order to develop the interests, capabilities and potential of all students pursuing careers in academic, government, or industrial biomedical sciences.

In addition, the BMR program offers a non-thesis Master of Science degree with a medical sciences area of emphasis to improve the science foundation of students seeking admission into doctoral programs in medicine or other health-related professions. Admission into the BMR M.S. Medical Sciences program does not guarantee admission into medical school. Additionally, a research component to this area of emphasis is available, but not required. Students choosing the research component may work up to 19 hours per week while earning a minimum of $10/hour. Students are expected to stay in good academic standing.

Also offered is the combined M.D./Ph.D. Students in this program blend the discovery of new knowledge with clinical medicine at the intersection of science and medicine. M.D./Ph.D. Most graduates work as physician-scientists at medical schools, conducting disease-related research and applying the results to the treatment of patients. They have a unique perspective on both the basic science and clinical science behind disease. Further general information is available at the Association of American Medical Colleges website (aamc.org (http://www.aamc.org)).

Admission Requirements

Applicants must meet the admission requirements of both Marshall University Graduate Admissions (http://marshall.edu/admissions/graduate/) (http://marshall.edu/admissions/graduate/)/) - and the Biomedical Research program of the Marshall University Joan C. Edwards School of Medicine https://jcesom.marshall.edu/research/ (https:// jcesom.marshall.edu/research/).

Applicants are directed to apply through the Biomedical Sciences Centralized Application System (BioMedCAS, https://biomedcas.liaisoncas.org/). Completion of a secondary application once admitted is also required; instructions will be sent from the department to the applicant. Interested persons should visit https://jcesom.marshall.edu/research (https://jcesom.marshall.edu/research/), e-mail mubiomed@marshall.edu, and/ or call 304-696-3365.

Persons interested in the Medical Sciences M.S. program (non-thesis) should visit https://jcesom.marshall.edu/students/ms-in-biomedical-research-with-medical-sciences-emphasis/, e-mail medicalsciences@marshall.edu, (medicalsciences@marshall.edu) and/ or call 304-696-3531.

Minimum Admission Requirements

- A baccalaureate degree from an accepted, accredited college or university.
- Successfully completed, with a grade of C or better, one year of general biology, physics, general chemistry, and organic chemistry, all with associated laboratories. A semester of biochemistry or molecular biology is also required.
- A recommended minimum Grade Point Average (GPA) of 3.0.
- A recommended minimum GPA of 3.0 in combined science and math courses.
- Official transcript(s) from undergraduate degree granting institution(s). Transcripts for post-baccalaureate or graduate coursework may be required at the discretion of the program.
- Departmental materials: three recommendations, program online form, written statement addressing educational and career goals, CV/ resume.

The GRE is not required; however, GRE scores can be submitted to strengthen your application. Applications are accepted on a rolling basis and are reviewed until the class is filled. Applications are only considered once we have received all required documentation.

Applications are accepted on a rolling basis and are reviewed until the class is filled. Applications will be considered after the priority deadline until June 30, if openings are available. International applicants should adhere to the deadlines set in place by the Office of International Admissions.

The Medical Sciences M.S. (non-thesis) program admits students in both the fall and spring terms.

Applications are accepted on a rolling basis and are reviewed until the class is filled. The application deadline for fall admission is June 30. The application deadline for spring admission is December 1. International applicants should adhere to the deadlines set by the Office of Admissions.

Conditional Admission

The Medical Sciences program may admit applicants conditionally, for one term, pending receipt of the final official transcript from the undergraduate degree-granting institution.

Duration of Degree Program

Students are expected to complete the degree within two years.

Entry Term

BMR M.S. (non-thesis) students with an area of emphasis in Medical Sciences can matriculate in either the fall or spring term.

Program Requirements

A minimum of 36 credit hours is required for the non-thesis degree. In addition, the student must pass a written comprehensive examination covering their courses.

In addition, after 12 hours of coursework has been completed, the student must submit an M.S. Plan of Study form to the Office of Graduate Studies.

To remain in good academic standing and to graduate, the student must have a minimum graduate GPA of 3.0.

Plan of Study

Biomedical Research, M.S. (Non-Thesis Medical Sciences Area of Emphasis)

All students are required to successfully complete the following core curriculum:

Code	Title	Credit Hours
Core Curriculum		
ACB 622	Gross Anat/Embryology II	3
BMR 601	Intro DNA, RNA & Proteins	3
BMR 602	Intro Cells and Metabolism	3
BMR 603	Regulation Cell Function	2
BMR 604	Cell Basis of Disease	1
BMR 785	Intro to Research	3
BMS 605	Micro Pharm Med Sciences	5
BMS 634	Biostat Epidem Med Sci	2
PHS 629	Mammalian Physiology	6
PMC 621	Medical Pharmacology I	6
PMC 622	Medical Pharmacology II	2
Total Credit Hours		**36**

Electives

Elective classes include BMS 609 (Orthopedics and the Neural Network).