


BIOMEDICAL SCIENCES MAJOR

With a major in biomedical sciences, you will study the sciences from a human perspective to develop a solid foundation for a career in the health professions. The 33 credits in the major (in blue below) include three required courses (in anatomy, physiology, and biochemistry), courses selected from three different content areas (Anatomy and Systems, Cell and Molecular, and Disease and Pathology) and major electives. The flexible design of this major allows you to tailor your degree to match your long-term interests.

Freshman Year

General Biology 1
General Chemistry 1
MCC Foundations in Rhetoric
MCC Foundations in Theology
General Elective
Contemporary Issues in Biomedical Sciences

General Biology 2
General Chemistry 2
MCC Foundations in Philosophy
MCC Engaging Social Systems and Values 1
General Elective or *Introduction to Psychology (pre-prof track)*

Sophomore Year

Clinical Human Anatomy
Survey of Organic Chemistry or Organic Chemistry 1
Biological Investigation
General Elective or *MATH elective (pre-professional track)*
MCC Foundations in Methods of Inquiry

Biochemistry
Organic Chemistry 2 (pre-professional track)
Statistics
General Elective or *Principles of Sociology (pre-prof. track)*
MCC Discovery – Social Sciences

Junior Year

Human Physiology
Anatomy and Systems Content Area
Health and Society Cognate
MCC Discovery – Humanities
General Elective or *Physics 1 (pre-professional track)*

Diseases and Pathology Content Area
Cell and Molecular Content Area
General Elective or *Physics 2 (pre-professional track)*
MCC Discovery – Natural Science and Math
General Elective

Senior Year

Cell and Molecular Content Area
BISC Elective
Medical Ethics
MCC Discovery – Elective
General Elective

Diseases and Pathology Content Area
BISC Elective
MCC Culminating Course
General Elective
General Elective

MCC = Marquette Core Curriculum (required of all students at MU)

Why Biomedical Sciences (BISC) at Marquette University?

- You will find the biomedical sciences major a natural fit if you plan on attending medical school or other health-related graduate programs. Our graduates are accepted to medical schools at rates that well exceed the national average. Once there, virtually all of our grads cite the ease of transition and academic advantage provided by their strong background in the biomedical sciences.
- Participate **in cutting edge research**. Whether through the summer research program, independent study, or a paid position, work with internationally respected researchers tackling some of society's most pressing medical problems.

(see other side)

www.marquette.edu/biomedical-sciences

- **Accelerated degree tracks** for professional and graduate programs at MU:

    - A major in biomedical sciences is the starting point for admission to the **Physician Assistant Studies program** at Marquette University. Students admitted to the BISC/PA track during their undergraduate career can complete their undergraduate and master degrees in as little as 5 years.

    - Students admitted to the **Pre-Dental Scholars** program (either as an incoming freshman or in their first year at MU) will begin their dental studies in their senior year, completing both their undergraduate and doctoral degrees in a total of 7 years (as opposed to the typical 8 years).

    - Students admitted to the **Doctor of Physical Therapy** program, either as an incoming freshman (direct admit) or as an internal transfer applicant, begin their DPT studies in their senior year, completing both their undergraduate and doctoral degrees in 6 years.

    - A major in biomedical sciences is one starting point for admission to the **STEM MBA program** at Marquette University. Students admitted to the BISC/STEM MBA track for their junior year complete both their undergraduate and master degrees in a total of 5 years.

    - A major in biomedical sciences is the starting point for admission to the **Early Assurance PharmD program**, which is offered in conjunction with the Medical College of Wisconsin. Students admitted to the BISC/PharmD track during their undergraduate career may be eligible to matriculate to MCW's School of Pharmacy in their senior year, completing both their undergraduate and doctoral degrees in 6 years.

What can I do with a major in Biomedical Sciences?

- You will take courses as an undergraduate that most other research institutions limit to their graduate students, providing you with the intellectual tools and scientific proficiency you'll need to **gain a competitive advantage** and **be successful** in graduate and professional programs.
- With 20+ credits of general electives, you can **combine this major with other areas of study**, such as business administration, marketing, Spanish, communication studies, and psychology. Your scientific expertise will give you an edge in professional arenas such as marketing, advertising, computer science, journalism, medical translation, medical/health industry, pharmaceutical sales/research, etc.
- Whether you plan to attend graduate school or enter the work force after graduation, you can tailor your major to match your long-term goals/interests through your course options within the three content areas and BISC major electives. Course options include:

    - Advanced Human Anatomy
    - Head and neck anatomy
    - Introduction to dentistry
    - Medical genetics
    - Public health
    - Forensic science
    - Pharmacology
    - Biology, Moral Behavior and Policy
    - Principles of Human Embryology
    - Molecular Diagnostics
    - Functional Neuroanatomy
    - Microbiology Laboratory
    - Independent Study - Complete a focused research project with a faculty member in the biomedical sciences department.

        Faculty areas of research include:

        - The study of brain mechanisms involved in drug craving and relapse in addicts; hormones secreted with exposure to stressful stimuli and how they can lead to illness
        - Proteins that reveal how alcohol acts on the central nervous system at the molecular level
        - The body's regulations of food intake and energy metabolism
        - Mechanisms of neurodegeneration involved in stroke, Parkinson's disease and Alzheimer's disease.