

MOLECULAR AND BIOMEDICAL BIOLOGY

Students seeking biomedical careers can pursue specialized studies in cellular and molecular biology. Molecular and Biomedical Biology majors gain real-world experience in biomedical research during the required biotechnology internship under the Molecular Biotechnology Pathway. Under the Biomedical Humanities Pathway, Molecular and Biomedical Biology majors explore perspectives that connect the human condition to biomedicine. The Molecular and Biomedical Biology major is an outstanding way to prepare for graduate programs in cellular and molecular biology, a career in the biotechnology industry, or the health professions.

Other Information

All coursework taken for the Molecular and Biomedical Biology major or minor must be completed with a grade of "C-" or better.

Overlapping Restrictions

Students may not earn a Molecular & Biomedical Biology major and Biology minor, nor a Biology major and Molecular & Biomedical Biology minor.

For a double major in Biology and Molecular & Biomedical Biology

-Beyond: BIOL 1450, BIOL 1750, BIOL 2140 and BIOL 3020, no other biology courses may count for both majors.

Molecular & Biomedical Biology with a double major / dual degree (BA MEDH; BS MBB) in Medical Humanities:

- Students with this combination of majors must select the MBB Track I: Molecular Biotechnology pathway. The MBB Track II: Biomedical Humanities pathway cannot be followed for a student completing both majors.

Molecular & Biomedical Biology with a double major in Bioinformatics:

-Beyond BIOL 1450, BIOL 1750, BIOL 2140, and BIOL 3020, no other biology courses may satisfy the requirements for both majors.

-No part of the Bioinformatics major may satisfy requirements within the MBB Track I: Molecular Biotechnology pathway.

Molecular & Biomedical Biology with a double major in Neuroscience:

-Beyond BIOL 1450, BIOL 1750, and BIOL 2140, no other biology courses may satisfy requirements for both majors.

Molecular and Biomedical Biology and Chemistry:

- MBB majors may add a Chemistry minor or double major (no concentration) without overlapping restrictions
 - MBB and Chemistry-Medicinal Chemistry as double majors may not count CHEM 4660-4664 Biochemistry II Lecture and Lab toward both majors.
 -Chemistry-Medicinal Chemistry majors may add a Molecular and Biomedical Biology minor without overlapping restrictions

Contact Information

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Website (<http://www.unomaha.edu/college-of-arts-and-sciences/biology/academics/biotechnology.php>)

Degrees Offered

- Molecular and Biomedical Biology, Bachelor of Science (<http://catalog.unomaha.edu/undergraduate/college-arts-sciences/biotechnology/biotechnology-bs/>)

Writing in the Discipline

All students are required to take a writing in the discipline course within their major. For the Molecular and Biomedical Biology major, the writing in the discipline requirement can be fulfilled by completing a sequence of approved biology courses at UNO that incorporate discipline specific writing as part of their requirements. To satisfy the requirement for the writing in the discipline course students must complete BIOL 1450 AND BIOL 1750, two courses from BIOL 2140, BIOL 3020 and BIOL 3340 and two additional 3000/4000 level courses that are approved as meeting the writing requirement by the Department of Biology. Only courses taken at UNO and after January 1, 2010 can be applied to this requirement. Students not meeting the writing requirement through this sequence of courses will fulfill the writing requirement by completing BIOL 3150 or, ENGL 3980, or another college-approved advanced writing course.

Minors Offered

- Molecular and Biomedical Biology, Minor (<http://catalog.unomaha.edu/undergraduate/college-arts-sciences/biotechnology/biotechnology-minor/>)

At a most basic level molecular and biomedical biology involves the use of biological organisms, systems, or processes to develop technologies and products to improve the quality of life. Nowhere is this more apparent than in healthcare and new avenues to diagnose, treat, and study disease. The curriculum focuses on molecular biology, genetics and genomics, cellular biology, and biochemistry. Through the Molecular Biotechnology track, students are able to participate in research through a semester-long internship in an academic, commercial, clinical, or government laboratory in the region. Within the Biomedical Humanities track, students are exposed to perspectives that connect the human condition to biomedicine.

- Laboratory Technologist
- Research Technician
- Biomedical Scientist
- Pharmaceutical/Medical Product Sales Representative
- Health Professional
- Health Educator
- Data Analyst

Specialized fields include:

- Agricultural or animal biotechnology
- Bio-based fuels
- Pharmaceuticals
- Conservation and the environment
- Medical technology
- Healthcare
- Biomedical consulting