

BIOCHEMISTRY AND MOLECULAR BIOLOGY

A common interest in the workings of the cell links biochemists and molecular biologists together.

ABOUT THE PROGRAM

The wide variety of chemical reactions that occur in the cell are the interest of the biochemist, while the genetic storage, transfer and use of information is the domain of the molecular biologist and structure-function relationships interest both.

Biochemistry and molecular biology meld together into a rich understanding of the action and regulation of processes that sustain life.

MAJORS

The Biochemistry and Molecular Biology Major is a Bachelor of Science degree offered jointly by the departments of Biology and Chemistry to train students in this exciting field. It is accredited by The American Society of Biochemistry and Molecular Biology (ASBMB), ensuring a thorough grounding in the discipline. Students will learn the concepts and skills required to be successful scientists in the field. Students will be prepared for graduate study in biochemistry and molecular biology and related fields or for entry into technical careers.

Biochemistry And Molecular Biology

The major also provides excellent preparation for professional degrees such as medicine, dentistry or veterinary science. Students take a rich, interdisciplinary core of biology, chemistry, mathematics and physics courses that include the following:

Required Chemistry Courses:

- CHEM 125/127 and 126/128 – General Chemistry I and II with Labs **or** CHEM 131 and 132 – Accelerated General Chemistry and Accelerated General Chemistry Laboratory
- CHEM 221/255 and 231/256A – Organic Chemistry I and II with labs
- CHEM 311, 314, 315 – Biochemistry I and II and lab
- CHEM 343, 345 – Physical Chemistry I and lab

Required Biology Courses:

- BIOL 105/107 – General Biology I and Lab
- BIOL 106/108 – General Biology II and Lab
- BIOL 366 – Molecular Biology

Required Cognate Courses:

- MATH 131 and 132 – Calculus I and II
- PHYS 121/141 and 122/142 – General Physics I and II with labs

Advanced Courses:

Students are required to take an additional eight credit hours from the biology and chemistry offerings listed below. Students should take at least four credits from each department.

- BIOL 356/357 – Genetics/Genetics Lab
- BIOL 348/349 – Cell Biology/Cell Biology Lab
- BIOL 301 – General Microbiology
- CHEM322/324 - Inorganic Chemistry/Inorganic Chemistry Lab
- CHEM 331/332 – Analytical Chemistry/Analytical Chemistry Lab
- BIOL/CHEM 335 – Neurochemistry and Disease
- BIOL 355 – Developmental Biology
- BIOL 340 – Advanced Topics in Plant Biology (depending on topic)
- BIOL 341 – Virology
- CHEM 344/346 – Physical Chemistry II/Physical Chemistry II Lab

FACULTY & STAFF

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