



BCH major
website

The Biochemistry Major

Challenge your Mind!

The biochemistry major provides a rigorous and exciting introduction to the chemical basis of biology

Prepares students for:

- Graduate studies in the biomedical sciences, health-related professional schools, & secondary school education programs
- Entry level positions in private or government laboratories or pharmaceutical and biotechnical industries.

Biochemistry majors can participate in faculty sponsored independent research!

- One of the most exciting and rewarding experiences of a student's education.
- Students can receive academic credit.

Biochemistry BS with honors:

- maintain a cumulative GPA of at least 3.5 in major courses
- prepare an honors thesis based on independent research.

Accelerated BS, MS or BS, MBA Options:

- Combine your bachelor of science degree with either a master's of science (MS) in Chemistry or a master's in business administration (MBA).



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SBU
bulletin

The Biochemistry Major Curriculum



graduation
plans

Foundational Courses in Related Fields:

- Calculus (1 year)
- General Chemistry with lab (1 year)
- Organic Chemistry (1 year) with lab (1 semester)
- Physics with lab (1 year)

Core Courses in Biology:

- Ecology and Evolutionary Biology (1 semester)
- Cellular and Molecular Biology (1 semester)
- Cell and Organ Physiology (1 semester)
- Introductory Biology Laboratory (1 year)

Advanced Courses in Biology and Chemistry:

- Genetics (1 semester)
- Cell Biology (1 semester)
- Biochemistry I and II (1 year)
- Physical Chemistry (1 semester)
- Advanced Laboratory in Biochemistry (1 semester)
- Two Upper-Level Biology or Chemistry Electives

Upper-Level Elective Topics Include:

Bioinformatics, cancer biology, chemistry, cellular signaling, computational modeling, developmental biology, evolution, genetic engineering, human genetics, immunology, microbiology, neurobiology, physiology, and many others.



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AP credit:

The Biochemistry Major

Frequently asked questions



Pre-health

Will my AP courses exempt me from Biochemistry major course requirements? YES

- Biology: (no SBU credit, but great preparation)
- Calculus AB: AP score 4 or 5 (MAT 131)
- Calculus BC: AP score 4 or 5 (MAT 131 & MAT 132)
- Chemistry: AP score 4 or 5 (CHE 131 + waiver of 133)
- Physics C: Mechanics score 4 or 5 (PHY 125)
- Physics C: Elec & Mag score 4 or 5 (PHY 127)

Will the Biochemistry major meet health professional school entry requirements? YES

- Average GPA (all courses) 3.6 – 3.7
 - Any academic major and these courses
 - One year of biology with lab
 - One semester of biochemistry
 - Two years of chemistry (general and organic) w/labs
 - One year of physics with lab
 - One semester calculus
 - One semester of statistics*
 - One year of English
 - One to two courses in Psychology and Sociology
- * not required for the BCH major but recommended

PA and pharmacy schools may also want courses in: Microbiology and lab and human anatomy & physiology.

Veterinary schools usually also require: microbiology and a second semester of calculus and may require a developmental biology course

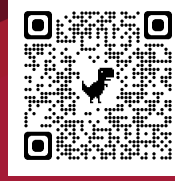
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The Biochemistry Major plus...

What degrees are needed for future careers?

Health professions

Medicine (MD or DO), Dentistry (DDS), Veterinary Medicine (DVM), Pharmacy (PharmD), Optometry (OD), Podiatry (DPM), and Audiology (AuD)

Public Health (MS, PhD)

Nursing (BS), Physicians Assistants (BS,MS)

Forensic Science (BS,MS)



SBU career ctr

Research

Independent research in academia/biotech/government (PhD)

Research technician in academia/biotech/government (BS, MS, PhD)

Education - teaching

University (PhD)

College, Community College (MA, MS, PhD)

Secondary School (MS, PhD)

Science Communication, Law, Finance

Patent or Environmental Law (JD)

Journalism and Science Writer (BA, BS, MA, MS, PhD)

Biotech Finance (JD)

Science Administration

NIH, NSF, Interior Department, FDA, Public Health, CDC, Biotechnology and Pharmaceutical companies, Reagent and Diagnostic Companies (BA, BS, MA, MS, PhD)

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