

Biochemistry and Molecular Biology

College of Science, Engineering and Mathematics
Department of Chemistry and Biochemistry
(907) 474-5510
www.uaf.edu/chem/



M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30 credits;
Ph.D.: 18 thesis credits

Alaska presents rich opportunities for biochemical and molecular biological research. Plants and animals living in the Arctic have evolved remarkable genetic and biochemical adaptations to the region's characteristic low temperatures and dim sunlight. For instance, a large algae that inhabits the floor of the Beaufort Sea along the northern coast of Alaska stores carbohydrates during the continuous daylight of the arctic summer, then uses that carbohydrate for growth during the long arctic night under the pack ice. Our understanding of the molecular mechanisms underlying this adaptation is far from complete, and solutions to this and many other fascinating biochemical problems beckon researchers to the Arctic.

The biochemistry and molecular biology program utilizes faculty from many UAF departments and research institutes and emphasizes an understanding of the molecular principles involved in life processes. The program provides academic and research experience for both undergraduate and graduate students who are interested in careers in the growing area of biotechnology. This program may be especially attractive to students interested in medicine.

Graduate Program—M.S. Degree

1. Complete the general university requirements (page 166).
2. Complete the master's degree requirements (page 170).
3. Complete a thesis.
4. Minimum credits required30

Graduate Program—Ph.D. Degree

1. Complete the general university requirements (page 166).
2. Complete the Ph.D. degree requirements (page 169).
3. Complete program courses12
4. Complete electives4
5. Minimum credits required18
See Chemistry.
See Environmental Chemistry.

Note: Page numbers refer to the UAF 2004-2005 academic catalog, which can be viewed online at www.uaf.edu/catalog/.

