Biochemistry and Molecular Biology

College of Natural Science 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

Biochemistry and molecular biology is an interdepartmental program administered by the Department of Chemistry and Biochemistry with research support through the Institute of Arctic Biology. A broad range of biomedical research experiences are available including molecular and cellular neuroscience, proteomics, protein structure-function and molecular toxicology. The arctic environment provides additional research opportunities in environmental biochemistry, adaptations and molecular genetics.

UAF faculty and affiliate faculty at collaborating institutions provide a rich academic environment encompassing both research and comprehensive course offerings. Students with career interests in biotechnology, pharmaceutical sciences, environmental health, genetics and biomedicine are encouraged to apply. Students are normally accepted with financial support (fellowships, research assistantships and/or teaching assistantships) along with tuition waivers.

Graduate Program—M.S. Degree

1. Complete the general university requirements (page 182).
2. Complete the master's degree requirements (page 186).
3. Complete the following three core courses:
   CHEM 654—Protein Structure and Function 3
   CHEM 657—Molecular Foundations of Gene Expression 3
   CHEM 674—Membrane Biochemistry and Biophysics 3
4. Complete a research thesis.
5. Minimum credits required 30

Graduate Program—M.S. Degree with Neuroscience Option

1. Complete the general university requirements (page 182).
2. Complete the master's degree requirements (page 186).
3. Complete the following three core courses:
   CHEM 654—Protein Structure and Function 3
   CHEM 657—Molecular Foundations of Gene Expression 3
   CHEM 674—Membrane Biochemistry and Biophysics 3
4. Complete the following neuroscience course:
   BIOL 617—Neurobiology 3
5. Complete a neuroscience research thesis
6. Minimum credits required 30

Graduate Program—Ph.D. Degree

1. Complete the general university requirements (page 182).
2. Complete the Ph.D. degree requirements (page 186).
3. Complete the following three core courses:
   CHEM 654—Protein Structure and Function 3
   CHEM 657—Molecular Foundations of Gene Expression 3
   CHEM 674—Membrane Biochemistry and Biophysics 3
4. Complete three electives.
5. Complete Ph.D. dissertation.
6. Complete two seminar series (CHEM 692).
7. Minimum credits required (including core courses) 27

Graduate Program—Ph.D. Degree with Neuroscience Option

1. Complete the general university requirements (page 182).
2. Complete the Ph.D. degree requirements (page 186).
3. Complete the following three core courses:
   CHEM 654—Protein Structure and Function 3
   CHEM 657—Molecular Foundations of Gene Expression 3
   CHEM 674—Membrane Biochemistry and Biophysics 3
4. Complete three electives with two of the electives in neurosciences.
5. Complete Ph.D. dissertation in a field of neuroscience.
6. Complete two seminar series (CHEM 692).
7. Minimum credits required (including core courses) 27