BIOCHEMISTRY AND MOLECULAR BIOLOGY

College of Natural Science and Mathematics
Department of Chemistry and Biochemistry
907-474-3510
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 interdisciplinary 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, pharmacy, 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 198).
2. Complete the master’s degree requirements (page 202).
3. Complete the following three core courses:
   CHEM F564—Protein Structure and Function …………3
   CHEM F657—Molecular Foundations of Gene Expression …3
   CHEM F674—Membrane Biochemistry and Biophysics …3
5. Minimum credits required …………………………….30

Graduate Program — M.S. Degree with Neuroscience Option
1. Complete the general university requirements (page 198).
2. Complete the master’s degree requirements (page 202).
3. Complete the following three core courses:
   CHEM F564—Protein Structure and Function …………3
   CHEM F657—Molecular Foundations of Gene Expression …3
   CHEM F674—Membrane Biochemistry and Biophysics …3
4. Complete the following neuroscience course:
   BIOL F617—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 198).
2. Complete the Ph.D. degree requirements (page 203).
3. Complete the following three core courses:
   CHEM F564—Protein Structure and Function …………3
   CHEM F657—Molecular Foundations of Gene Expression …3
   CHEM F674—Membrane Biochemistry and Biophysics …3
4. Complete three electives.
7. Minimum credits required (including core courses) ………..30

Graduate Program — Ph.D. Degree with Neuroscience Option
1. Complete the general university requirements (page 198).
2. Complete the Ph.D. degree requirements (page 203).
3. Complete the following three core courses:
   CHEM F564—Protein Structure and Function …………3
   CHEM F657—Molecular Foundations of Gene Expression …3
   CHEM F674—Membrane Biochemistry and Biophysics …3
4. Complete three electives with two of the electives in neurosciences.
7. Minimum credits required (including core courses) ………..38