Molecular Biosciences Program

MBS Faculty Committee (http://mbprogram.montana.edu/mbs_faculty_committee.html)

Program Description
The Molecular BioSciences Program offers an interdisciplinary program towards a Doctorate in Philosophy. You are able to pursue your science in a research area across departmental boundaries. Our integrated curriculum provides you with broad academic training necessary to excel in life science research. You will be able to participate in the first-year rotation in three different laboratories in your chosen research area. For more detailed information please visit the program website (http://mbprogram.montana.edu/).

Research Areas:
- Biofilm Sciences & Engineering (http://mbprogram.montana.edu/dept.asp?in_id=1)
- BioInspired Materials (http://mbprogram.montana.edu/dept.asp?in_id=5)
- Bioinformatics/Genomics/Proteomics (http://mbprogram.montana.edu/dept.asp?in_id=3)
- Biomedical Sciences (http://mbprogram.montana.edu/dept.asp?in_id=7)
- Biophysics (http://mbprogram.montana.edu/dept.asp?in_id=9)
- Cell, Developmental, & Molecular Biology (http://mbprogram.montana.edu/dept.asp?in_id=2)
- Chemical Biology (http://mbprogram.montana.edu/dept.asp?in_id=4)
- Environmental Microbiology (http://mbprogram.montana.edu/dept.asp?in_id=11)
- Ecology & Environmental Sciences (http://mbprogram.montana.edu/dept.asp?in_id=14)
- Immunology & Infectious Disease (http://mbprogram.montana.edu/dept.asp?in_id=8)
- Life in Extreme Environments (http://mbprogram.montana.edu/dept.asp?in_id=10)
- Plant Sciences (http://mbprogram.montana.edu/dept.asp?in_id=12)
- Neuroscience (http://mbprogram.montana.edu/dept.asp?in_id=15)
- Virology (http://mbprogram.montana.edu/dept.asp?in_id=6)

Our program offers students a common but rigorous educational experience for the first year, and continued challenge as you begin to specialize during your second year. MB Program students participate in seminar series, program retreats, teaching, and may attend scientific meetings. In the second year once you have chosen a research advisor based on your first-year rotation process, you will be formally admitted to one of the eleven participating sciences departments to conduct a research project leading to the awarding of a Doctorate of Philosophy.

Professors
This interdisciplinary program brings together faculty from over eleven basic science departments: Cell Biology and Neuroscience; Chemical and Biological Engineering; Chemistry and Biochemistry; Computer Science; Earth Sciences; Ecology; Immunology and Infectious Disease; Land Resources and Environmental Sciences; Mathematics; Microbiology; Plant Sciences and Plant Pathology; and three research centers: Center for Biofilm Engineering, Center for BioInspired Materials and the Thermal Biology Institute to provide students with the didactic and laboratory instruction they require to become successful research scientists. Members of the MB Program faculty are internationally recognized for their research. We have over 68 participating faculty (http://mbprogram.montana.edu) for the above mentioned departments and centers.

Admission
Ph.D. Degree Program
It is recommended that applicants for the Ph.D. program have a Bachelor’s or Master’s degree with a solid foundation of science courses.

Admission to the doctoral program follows the requirements of The Graduate School. Factors that the department uses in its admissions process include GRE scores, TOEFL scores (for non-native English speakers), reference letters, GPA, research experience and previous coursework.

Details about applying can be found at http://mbprogram.montana.edu/application.asp. The Molecular BioSciences Program encourages applicants to use the online application procedure.

Financial Assistance
The Molecular BioSciences Program at Montana State University is offering outstanding students a fellowship plus tuition waivers each year to fund their Ph.D. graduate education.

Program Requirements
Ph.D. Program First-Year
A Ph.D. student must complete a minimum of 6 credits of coursework each semester their first-year. Required courses include:

### Fall Semester
- **MBSP 594** Molecular BioSci Prgm Sem 1
- **MBSP 561** Molec Biosci Lab Rotation I 1
- **MBSP 562** Molec Biosci Lab Rotation II 1
- Two courses from any of the approved courses in the eleven participating sciences departments

### Spring Semester
- **MBSP 594** Molecular BioSci Prgm Sem 1
- **MBSP 563** Molec Biosci Lab Rotation III 1
- **MBSP 564** Molec Biosci Lab Rotation IV 1
- or **MBSP 575** Mol BioSci Prgm Rsch Project
- Two courses from any of the approved courses in the eleven participating sciences departments

Research Experience
Ph.D. students will gain research experience through their lab rotation, conference submissions, and attending conferences.

Research Facilities
Research Facilities vary on lab rotation selection