Twin Cities Campus

Biochemistry, Molecular Biology and Biophysics Minor

Biochemistry, Molecular Biology, & Biophysics TCBS

Graduate School

Link to a list of faculty for this program.

Contact Information:
Department of Biochemistry, Molecular Biology and Biophysics
6-155 Jackson Hall
321 Church St. SE
Minneapolis, MN 55455
612-625-6100
Email: bmbbgp@umn.edu
Website: http://cbs.umn.edu/academics/departments/bmbb/graduate-program/about-graduate-program

- Program Type: Graduate minor related to major
- Requirements for this program are current for Fall 2019
- Length of program in credits (Masters): 6
- Length of program in credits (Doctorate): 12
- This program does not require summer semesters for timely completion.

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The biochemistry, molecular biology and biophysics (BMBB) program is an interdisciplinary program that is supported by the College of Biological Sciences (CBS) and the Medical School of the University of Minnesota. The program provides a broad research-based education involving faculty from BMBB as well as many faculty members from several other departments in CBS, the Medical School, the College of Science and Engineering (CSE), the College of Food, Agricultural and Natural Resources Sciences (CFANS), and the College of Veterinary Medicine.

BMBB focuses on determining the molecular mechanisms that underlie basic biological functions using an integrated approach that encompasses biochemistry, chemistry, biophysics, genomics, molecular biology, proteomics, and structural biology. Special emphasis is placed on revealing how biological processes go awry in diseases including cancer, diabetes, heart disease, and AIDS. The program has four areas of emphasis: synthetic biology and biotechnology, molecular biology, metabolic and systems biology, and chemical and structural biology. All students are expected to demonstrate a minimum level of competence in these areas, but will emphasize the area most related to their thesis project.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Use of 4xxx courses towards program requirements is not permitted.

Program Sub-plans

Students are required to complete one of the following sub-plans.
Students may not complete the program with more than one sub-plan.

Masters

Required Courses (6 Credits)

Select at least six credits of BMBB coursework, chosen in consultation with the BMBB director of graduate studies.In extenuating cases, an alternative course may be substituted with the approval of the director of graduate studies.
BIOC 5xxx

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 28, 2024

BIOC 6xxx
BIOC 7xxx
BIOC 8xxx

Doctoral

Module Options (6 Credits)

Take at least 6 credits from the following, in consultation with the BMBB director of graduate studies.
BIOC 5535 - Introduction to Modern Structural Biology -- Diffraction (2.0 cr)
BIOC 5536 - Introduction to Modern Structural Biology - Nuclear Magnetic Resonance (2.0 cr)
BIOC 8005 - Biochemistry: Structure and Catalysis (2.0 cr)
BIOC 8006 - Biochemistry: Metabolism and Control (2.0 cr)
BIOC 8007 - Molecular Biology of the Genome (2.0 cr)
BIOC 8008 - Molecular Biology of the Transcriptome (2.0 cr)

Biochemistry Electives (6 Credits)

Take at least six credits, chosen in consultation with the BMBB director of graduate studies, to complete the 12-credit requirement. In extenuating cases, an alternative course may be substituted with the approval of the director of graduate studies.
BIOC 5xxx
BIOC 6xxx
BIOC 7xxx
BIOC 8xxx
GCD 5036 - Molecular Cell Biology (3.0 cr)

© 2005 by the Regents of the University of Minnesota
The University of Minnesota is an equal opportunity educator and employer.
Information current as of March 28, 2024