

BSB

Biochemistry and Structural Biology

BSB 509: Experimental Biochemistry and Structural Biology

An introduction to modern biochemical research techniques. The student spends a half-semester in the laboratory of each of four different members of the faculty. In each laboratory, the student participates in some aspect of the research being pursued by the faculty member. Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor. Fall

1-9 credits, Letter graded (A, A-, B+, etc.)

BSB 510: Experimental Biochemistry and Structural Biology

An introduction to modern biochemical research techniques. The student spends a half-semester in the laboratory of each of four different members of the faculty. In each laboratory, the student participates in some aspect of the research being pursued by the faculty member. Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor. Spring

1-6 credits, Letter graded (A, A-, B+, etc.)

BSB 512: Structural Biology and Spectroscopy

Theoretical principles and experimental methods used in the study of proteins and nucleic acids, e.g., spectroscopy, magnetic resonance and diffraction.

Prerequisites: MCB 520, or undergraduate physical chemistry course, plus matriculation in graduate program or permission of instructor.

Fall, 2 credits, Letter graded (A, A-, B+, etc.)

BSB 515: Computational Methods in Biochemistry and Structural Biology

Computational methods used in sequence searching and analysis, bioinformatics, graphical analysis of proteins, and nucleic acids. Prerequisite: This class is restricted to first year BSB, HBM, MCB PHD, & HBH PhD students. Exception requires approval from the course instructor.

Fall, 1 credit, S/U grading

BSB 532: Journal Club in Biochemistry and Structural Biology

Provides students with a forum for acquiring skills involved in the critical analysis and presentation of scientific data by active participation in seminars of major topics in

structural biology and biochemistry, and critical discussion of selected topics with presentation of papers from the literature. Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor
*1 credit, Letter graded (A, A-, B+, etc.)
May be repeated for credit.*

BSB 580: Advanced Structural Biology/ Structural Methods in Drug Discovery

This course is designed for students that want to gain theoretical and practical experience in macromolecular structure determination through NMR spectroscopy and/or X-ray crystallography. The course is organized into two modules: NMR spectroscopy and X-ray crystallography. Students may elect to take one or both modules. Emphasis will be placed on practical aspects of structural determination, including sample preparation, data collection and processing. In each of the modules, students will be guided through a complete structural determination project. A final project report per module will be required. Familiarity with Linux is desirable. Students are encouraged to contact instructors prior to enrolling. Crosslisted as BSB580 and HBH585.

Spring, 0-4 credits, S/U grading

BSB 581: Teaching Honors

Selected students whose performance in the basic required courses for the graduate program is in the top 10 percent conduct tutorials for first-year graduate students in the program and other students taking graduate courses for credit. The tutors are supervised and graded by faculty of the graduate program. Successful completion of this course makes students eligible to receive "Honors in Teaching" on their transcripts.

Fall and Spring, 1 credit, S/U grading

BSB 599: Research

Original investigation undertaken with the supervision of a faculty member.

*Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor
Fall and Spring, 1-12 credits, S/U grading
May be repeated for credit.*

BSB 601: Colloquium in Biochemistry and Structural Biology

A weekly series of talks and discussions by visiting scientists covering current research and thinking in various aspects of structural biology and biochemistry.

*Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor.
Fall, 0-1 credits, S/U grading
May be repeated for credit.*

BSB 602: Colloquium in Biochemistry and Structural Biology

A weekly series of talks and discussions by visiting scientists covering current research and thinking in various aspects of structural biology and biochemistry.

*Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor.
Spring, 0-1 credits, S/U grading
May be repeated for credit.*

BSB 603: Student Seminars in Biochemistry and Structural Biology

Seminars given by graduate students on the progress of their own thesis research. Required of all students every semester in which they are registered in the Graduate Program in Biochemistry and Structural Biology. Attendance is mandatory. Visitors are welcome.

*Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor.
Fall and Spring, 1 credit, S/U grading
May be repeated for credit.*

BSB 604: Student Seminars in Biochemistry and Structural Biology

Seminars given by graduate students on the progress of their own thesis research. Required of all students every semester in which they are registered in the Graduate Program in Biochemistry and Structural Biology. Attendance is mandatory. Visitors are welcome.

*Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor.
Fall and Spring, 1 credit, S/U grading
May be repeated for credit.*

BSB 699: Dissertation Research on Campus

Original investigations undertaken as part of the Ph.D. program under supervision of a research committee.

*Prerequisite: Advancement to candidacy (G5). Major portion of research must take place on SBU campus, or at the Brookhaven National Laboratory.
Fall, Spring, and Summer, 1-9 credits, S/U grading
May be repeated for credit.*

BSB 700: Dissertation Research off Campus - Domestic

Prerequisite: Must be advanced to candidacy (G5). Major portion of research will take place off-campus, but in the United States and/or U.S. provinces. Please note, Brookhaven National Labs and the Cold Spring Harbor Lab are considered on-campus. All international students must enroll in one of the graduate

student insurance plans and should be advised by an International Advisor.

*Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor
Fall, Spring, 0-9 credits, S/U grading
May be repeated for credit.*

BSB 701: Dissertation Research off Campus - International

Prerequisite: Must be advanced to candidacy (G5). Major portion of research will take place outside of the United States and/or U.S. provinces. Domestic students have the option of the health plan and may also enroll in MEDEX. International students who are in their home country are not covered by mandatory health plan and must contact the Insurance Office for the insurance charge to be removed. International students who are not in their home country are charged for the mandatory health insurance. If they are to be covered by another insurance plan they must file a waiver by second week of classes. The charge will only be removed if other plan is deemed comparable.

*Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor
Fall, Spring, 1-9 credits, S/U grading
May be repeated for credit.*

BSB 800: SUMMER RESEARCH

Prerequisite: Must be matriculated in BSB Graduate Program or permission of instructor
*S/U grading
May be repeated for credit.*