BIOCHEMISTRY & MOLECULAR BIOLOGY (BMB)

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**BMB 400 Special Topics: Mol Biology (1-3 Credit Hours)**
Courses of half a semester to a semester on different topics of molecular biology, treated in depth with readings of the current literature. Outcome: To learn about diverse areas of Molecular Biology which are not treated in regular courses.

**BMB 417 Molecular Biology (3 Credit Hours)**
The Biochemistry and Molecular Biology course will cover diverse subjects of importance to modern cell and organismal biology from a molecular biology perspective.

**BMB 471 Comp Molecular Genetics (3 Credit Hours)**
This course introduces advanced students to the importance of genetics to a wide range of biological problems. Outcome: Students will demonstrate an ability to read, think, write, and speak critically about various genetic approaches used to identify essential genes, mutagenesis and recombination, transcription, development, symbiosis, and pathogenesis.

**BMB 490 Spec Tps in Molecular Biology (1-3 Credit Hours)**
This course covers a specific topic in molecular biology. The topics can vary among different special topics courses.

**BMB 499 Research in Molecular Biology (1-9 Credit Hours)**
The students do mentored work in a laboratory on a research project. Their performance is evaluated by their mentor at the end of the year, and is given a pass/not pass grade. Outcome: To develop the ability to organize a research project proposing hypotheses and testing them in the laboratory and against the current literature.

**BMB 501 Molecular Bio Journal Club (1 Credit Hour)**
This is a weekly course where students take turns to present a scientific paper. Following the presentation there is a discussion by students and faculty. Students prepare the presentation under the supervision of a faculty mentor. Outcome: To develop the ability to read and analyze a scientific paper and to develop oral presentation skills and appropriate visual aids.

**BMB 502 Seminar in Molecular Biology (0 Credit Hours)**
Biweekly seminars where invited speakers from outside the institution present their work. The presentation is followed by a discussion by students and faculty. Outcome: To become familiar with current research in different molecular biology areas by listening to the actual scientist developing the work.

**BMB 524 Mol Biol & Genet of Develop (2 Credit Hours)**
This is a weekly course on Molecular aspects of Developmental Biology, with a mixture of lectures, discussions of original papers and presentations by external speakers. Outcome: An understanding of the principles of developmental biology with emphasis in the molecular genetics of development.

**Course equivalencies:** X-BICH524/MBIO524

**BMB 526 DNA Repair & Recombination (2 Credit Hours)**
This is a weekly course on mechanisms of mutagenesis, genetic repair and recombination. The course uses a mixture of lectures and discussions of original scientific papers. Outcome: An understanding of the basic mechanisms of mutagenesis, genetic repair, homologous recombination, and non-homologous end joining.

**Course equivalencies:** X-MBIO526/BICH526

**BMB 550 Molec Biol of Oncogenesis (2 Credit Hours)**
The course will cover different subjects in cancer molecular biology with a combination of lectures and discussions of original scientific papers. Outcome: A basic knowledge about mechanisms of oncogenesis and the biology of cancer, and an ability to search and understand the classic as well as modern literature on the subject.

**BMB 595 Thesis Supervision (0 Credit Hours)**
Supervised research and writing leading to the completion of the masters of science thesis and degree.

**BMB 600 Dissertation Supervision (0 Credit Hours)**
The students work on their dissertation under the supervision of their mentor and of their dissertation committee. Their progress is evaluated by their mentor and is given a letter grade. Outcome: Development of the dissertation project, writing and defense of the dissertation.