BMB - BIOCHEMISTRY AND MOLECULAR BIOLOGY

BMB 7010 General Biochemistry Lecture Cr. 4
Introduction to biochemistry: structure of biological molecules, enzymes, bioenergetics, intermediary metabolism. Biosynthesis of DNA, RNA, and proteins. Offered Fall.

BMB 7020 Biochemistry Laboratory Rotation Cr. 3
Research projects with various faculty. Offered Every Term.

BMB 7030 Core Concepts in Technologies in Biochemistry and Molecular Biology Cr. 4
Methods-based approach to understanding core concepts in biochemistry and biotechnology. Students acquire competence enabling them to explain and implement these approaches. Offered Fall. Corequisite: BMB 7010

BMB 7140 Foundations of Computational Biology Cr. 3
Introduction to basic concepts of linear algebra and their application to biomedical research data analysis. MATLAB programs are introduced and employed as the tool for practical implementation of computational methods. Offered Fall. Equivalent: IBS 7140

BMB 7320 Protein Structure and Function Cr. 3
Structure, function, and design of proteins: architecture, function, regulation, assembly and evolution of proteins and protein complexes; theory and techniques of kinetic analysis; newer techniques of protein design and engineering. Offered Winter. Prerequisite: BMB 7010, with a minimum grade of C

BMB 7330 Advanced Molecular Biology Cr. 2
Modern topics in biochemistry, including nucleic acid dynamics, genomic structure, DNA replication and repair, transcription, RNA processing, translation and protein synthesis. Offered Winter. Prerequisite: BMB 7010, (may be taken concurrently), with a minimum grade of C Equivalent: IBS 7330

BMB 7360 Advanced Structural Biology Cr. 2
Determination of structure and dynamics of biological molecules by NMR and crystallography; emphasis on protein structure and function. Offered Winter. Prerequisites: (IBS 7010 with a minimum grade of C and IBS 7020 with a minimum grade of C) OR (IBS 7015 with a minimum grade of C)

BMB 7670 Advanced Biochemistry Laboratory Cr. 2-10
Advanced laboratory techniques as applied to investigations of biological materials. Offered Every Term.

BMB 7890 Journal Club Cr. 1
Student presentations of papers from recent biochemistry literature; recommended for graduate students in biochemistry only. Offered Fall, Winter. Prerequisite: BMB 7010, with a minimum grade of C Repeatable for 6 Credits

BMB 7996 Research Cr. 1-15
Offered Every Term. Repeatable for 30 Credits

BMB 8999 Master's Thesis Research and Direction Cr. 1-8
Offered Every Term.

BMB 9990 Pre-Doctoral Candidacy Research Cr. 1-8
Research in preparation for doctoral dissertation. Offered Every Term. Repeatable for 12 Credits

BMB 9991 Doctoral Candidate Status I: Dissertation Research and Direction Cr. 7.5
Offered Every Term.

BMB 9992 Doctoral Candidate Status II: Dissertation Research and Direction Cr. 7.5
Offered Every Term. Prerequisite: BMB 9991, with a minimum grade of S

BMB 9993 Doctoral Candidate Status III: Dissertation Research and Direction Cr. 7.5
Offered Every Term. Prerequisite: BMB 9992, with a minimum grade of S

BMB 9994 Doctoral Candidate Status IV: Dissertation Research and Direction Cr. 7.5
Offered Every Term. Prerequisite: BMB 9993, with a minimum grade of S

BMB 9995 Candidate Maintenance Status: Doctoral Dissertation Research and Direction Cr. 0
Offered Every Term. Repeatable for 0 Credits

BMB 9999 Doct Diss Rsch&Dir Cr. 1-16
Offered Every Term.