Biological Chemistry


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Description: The biological chemistry concentration provides training in: (1) understanding the fundamental chemical principles governing biological systems; and (2) manipulating the chemistry-biology interface to achieve improved mechanistic understanding of biological systems and for developing therapeutics.

Guide for class selection: In addition to two required subjects, one additional subject must be completed from the list provided.

Restricted Electives

Required

5.08 Biological Chemistry II (U) same as 7.08
Prereq: 5.12; 5.07 or 7.05

7.41 Principles of Chemical Biology (U)
Prereq: 7.05

Select 1 subject from the list below:

5.35U Introduction to Experimental Chemistry [Module 2] (U)
Prereq: see module 12 (4 units) with other modules being optional

AND

5.36U Biochemistry and Organic Laboratory [Modules 4 and 5] (U)
Prereq: 5.07 or 7.05; and Module 2 or 5.310

7.37 Molecular and Engineering Aspects of Biotechnology (G) same as 10.441
Prereq: 2.005, 3.012, 5.60, 20.110, or 20.111; 7.06; or permission of instructor

20.201 Fundamentals of Drug Development (G)
Prereq: permission of instructor

20.352 Principles of Neuroengineering (U)
Prereq: permission of instructor

Electives

These additional subjects enhance the learning objectives of the concentration. Note that 5.310 can be substituted for 5.35U Module 2 to satisfy the Restricted Elective requirements given above.

5.13 Organic Chemistry II (U)
Prereq: 5.12

5.310 Laboratory Chemistry (U) [Can be substituted for 5.35U Module 2]
Prereq: None Coreq: 5.12

5.54 Frontiers in Chemical Biology (G)
Prereq: 5.13, 5.07, 7.06; permission of the instructor
5.64  **Frontiers of Interdisciplinary Science in Human Health and Disease (G)**
same as HST.539
Prereq: 5.13, 5.60; 5.07 or 7.05

5.78  **Biophysical Chemistry Techniques (G)**
Prereq: 5.07 or 7.05

9.12  **Experimental Molecular Neurobiology (U)**
Prereq: 9.01, Biology (GIR)