

Department of Molecular Biology and Biochemistry: MS Approved Electives for Biotechnology and MSBTM

*Note: You may only take 1 Public Health or Epidemiology class from the approved list as an elective

*Note: Certain courses may not be offered each year, and the quarter may vary. Enrolling in two 2-credit workshops/journal clubs is not equal to an elective.

*If a course you desire to take is not on this list, it must be approved by the Program Director.

*To make a case for approval of a course that is not listed as an elective, please send the program director an email with the following information:

- a. Course number
- b. Course instructor(s)
- c. Course content (attach a syllabus if available)
- d. A brief justification of why this course is best suited to your graduate studies.

Course	Quarter Offered
Department of Chemistry	Contact: Bailey Spelman
CHEM 218 Inorganic Chemistry	Spring
CHEM 219 Chemical and Structural Biology	Winter
CHEM 223 Biological Macromolecules (same as Pharmsci 223)	Spring
Department of Biological Chemistry	Contact: Barbara Shainberg
BIO CHEM 207 Advanced Molecular Genetics	Spring
BIO CHEM 225 Chromatin Structure and Function (offered every other Fall)	Fall '25
BIO CHEM 228 Neuromuscular Biology and Disease	Winter '26
BIO CHEM 242 Fundamentals and Recent Advancements in Bioinformatics	Winter
Department of Developmental and Cell Biology	Contact: BioSci Graduate Studies & Support (biosci-grad@uci.edu)
DEV BIO 210 Developmental Genetics and Genomics	Possibly Spring '26
DEV BIO 214 Principles Genomics	Fall
DEV BIO 231B Cell Biology	Fall
DEV BIO 245 Stem Cell Biology	Winter
Department of Microbiology and Molecular Genetics	Contact: Office of Academic Affairs (hsaa@hs.uci.edu)
M&MG 206 Regulation of Gene Expression	Spring
M&MG 215 Integrative Immunology I (same as Physio 215A)	Fall
M&MG 221 Immunopathogenic Mechanisms of Disease	Spring
M&MG 222 Molecular Pathology of Viral Infection	Spring
Department of Molecular Biology and Biochemistry	Contact: BioSci Graduate Studies & Support (biosci-grad@uci.edu)
204 Protein Structure and Function	Fall
205 Molecular Virology	Winter
215A Integrative Immunology I.	Fall
211 High Resolution Structures-NMR and X-ray	Spring
215B Integrative Immunology II *Discussion based immunology course that assumes some working familiarity with basic immunology	Winter
217A Cancer Biology I	Winter
217B Cancer Biology II (every other year)	Spring '26
221 Advanced Topics in Immunology (spring)	not offered this year
223 Introduction to Computational Biology (crosslisted with BME 232)	Fall
243 Stem Cell Topics	Spring
248 Metallobiochemistry	not offered this year
Department of Neurobiology and Behavior	Contact: BioSci Graduate Studies & Support (biosci-grad@uci.edu)
NEURBIO 127/217 Neuroimmunology II	Winter
NEURBIO 206 Molecular Neuroscience	Fall
NEURBIO 207 Cellular Neuroscience	Winter
NEURBIO 227 Bioinfo and Systems Bio	Winter
NEURBIO 232 Regenerative Neurobiology (every other year)	Winter, every other year
NEURBIO 233 Drug Addiction	Spring
NEURBIO 254 Molecular Neurobiology	Spring '26
NEURBIO 257 Statistics Neurobio	Winter
NEURBIO 230 Epigenetics in Human Health and Disease	not offered this year
Department of Physiology and Biophysics	Contact: Claire Chen
PHYSIO 232 Physiology of Ion Channels	Spring
PHYSIO 252 Introduction to Proteomics	Winter
Department of Anatomy and Neurobiology	Contact: Office of Academic Affairs (hsaa@hs.uci.edu)
ANATOMY 230 Stem Cell Policy/Topics	Winter and Spring
Department of Biomedical Engineering	Contact: Maggie Mulcare
BME 210 Molecular and Cellular Engineering	Fall
BME 238 Spectroscopy and Imaging	Fall
BME 261 Biomedical Microdevices	Course no longer offered
BME 295 Special Topics* (obtain syllabus and submit to MSBTM Director for approval)	Fall, Winter, and Spring
BME 295 Data Science	Fall
BME 295 Gene Editing	Fall
Biomedical and Translational Science	Contact: Office of Academic Affairs (hsaa@hs.uci.edu)
BaTS 232 Design and Analysis of Clinical Trials	Fall
Department of Pharmaceutical Sciences	Contact: Graciela Espejo
PHRMSCI 223 Biomacromolecules (same as Chem 223)	Fall
PHRMSCI 251 Experimental Pharmacology	Winter
PHRMSCI 254 Introduction to Pharmacology	Fall
PHRMSCI 263 Pharmacogenomics	Offered periodically
PHRMSCI 272 RNA World: Disc and Mech	Spring
PHRMSCI 274 Nanomedicine	Offered periodically
PHRMSCI 275 Drug Discovery Computer Techniques	Winter
PHRMSCI 277 Medicinal Chemistry	Winter
PHRMSCI 279 Emerging Technology in PharmSci	Spring
Department/School of Public Health, Epidemiology	Contact: Alice Shin
EPI 201 Cancer Epidemiology* (obtain syllabus and submit to MSBT Director for approval)	Every other year (Spring '25)
PUBHLTH 213 Epidemiology in Global Health	Fall
PUBHLTH 222 Health Policy & Management	Spring
PUBHLTH 242 Health Communication	Every other Fall (Fall '25)
PUBHLTH 245 Health Promotion Planning	Winter
PUBHLTH 250 Health Status and Care	Fall
PUBHLTH 253 Introduction to Community Health	Fall
PUBHLTH 280 Global Burden of Disease	Every other Fall
PUBHLTH 264 Environmental Health Sciences (EPID 264)	Winter
PUBHLTH/EPIDEM 275 - Bioinformatics	Offered every other Winter/Spring
EPIDEM 275 Intro to the Machine Learning in R	Spring
PUBHLTH 290 Social Network & Health	Winter
PUBHLTH 290 Stem Cell Ethics	Every other Fall (Fall '26)
PUBHLTH 290 Nutrition in Health and Disease	Every other Fall (Fall '26)
Department of Chemical and Biomolecular Engineering	Contact: Elizabeth Randall
CBE 249 Special Topics	Every quarter
CBE 264 Drug Delivery	Fall