

Bioinformatics and Systems Biology Graduate Program

2013-14 Projected Course Offerings

Please note: Departments may change or cancel the quarter(s) in which their courses are offered. Refer to the schedule of classes for an active listing. The next quarter's schedule is posted Friday of 5th week.

	Fall	Winter	Spring
BIOINFORMATICS AND SYSTEMS BIOLOGY CORE COURSES			
Bioinformatics II: Introduction for Bioinformatics Algorithms (BENG 202/CSE 282)		X	
Bioinformatics III: Genomic Analysis (BENG 203/CSE 283)			X
Bioinformatics IV: Statistical Methods in Bioinformatics (MATH 283)	X		
TBA: A new course will be announced soon to replace Bionf I: Phar 201. Tentatively BENG 207/BNFO 285 (Prof. Sheng Zhong) in Winter 2014.		?	
BNFO 281: Bioinformatics and Systems Biology Seminar	X	X	X
BNFO 283: Bioinformatics Student Research Talks	X	X	X
Choose one: SOMI 226 or BIOM 219. Scientific Ethics (must register on both Tritonlink and ethics.ucsd.edu)	X		X
BIOMEDICAL INFORMATICS CORE COURSES			
Bioinformatics II: Introduction for Bioinformatics Algorithms (BENG 202/CSE 282)		X	
MED 264: Principles of Biomedical Informatics (BMI students take this instead of BENG 203/CSE 283)	X		
Bioinformatics IV: Statistical Methods in Bioinformatics (MATH 283)	X		
TBA: A new course will be announced soon to replace Bionf I: Phar 201. Tentatively BENG 207/BNFO 285 (Prof. Sheng Zhong) in Winter 2014.		?	
MED 262: Current Trends in Biomedical Informatics (BMI students take this instead of BNFO 281)	X	X	X
BNFO 283: Bioinformatics Student Research Talks	X	X	X
Choose one: SOMI 226 or BIOM 219. Scientific Ethics (must register on both Tritonlink and ethics.ucsd.edu)	X		X
BIOLOGY ELECTIVES			
Elective BIO-1: Biochemistry			
BENG 230A: Biochemistry	X		
CHEM 209: Macromolecular Recognition	X		
CHEM 213: Chemistry of Biological Macromolecules			X
CHEM 216: Chemistry of Enzyme Catalyzed Reactions		X	
Elective BIO-2: Molecular Genetics			
BICD 100: Genetics	X	X	X
BGGN 220: Graduate Molecular Biology	X		
BGGN 223: Graduate Genetics			X
Elective BIO-3: Cell Biology			
BICD 110: Cell Biology	X	X	X
BICD 130: Embryos, Genes, and Development		X	
BGGN 222: Graduate Cell Biology		X	
BGGN 230/CHEM 221: Signal Transduction		X	

COMPUTER SCIENCE/MATH/STATISTICS ELECTIVES			
Elective CS-1: Algorithms			
CSE 101: Design and Analysis of Algorithms	X	X	X
CSE 200: Computability and Complexity	X		
CSE 202: Algorithm Design and Analysis	X	X	X
CSE 280A: Algorithms in Computational Biology		X	
MATH 261A: Probabilistic Combinatorics and Algorithms (offered odd years in fall)	X		
Elective CS-2: Machine Learning and Data Mining			
CSE 250A: Artificial Intelligence: Search and Reasoning	X		
CSE 250B: Artificial Intelligence: Learning		X	
Bioinformatics I: Biological Data and Analysis Tools (PHAR 201)	X		
Elective CS-3: Mathematics and Statistics			
MATH 274: Numerical Methods for Physical Modeling	X		
MATH 280A: Probability Theory	X		
MATH 281A: Mathematical Statistics	X		
MATH 281B: Mathematical Statistics		X	
PHYS 210A: Equilibrium Statistical Mechanics			X
PHYS 210B: Equilibrium Statistical Mechanics	X		
SYSTEMS BIOLOGY ELECTIVES			
Elective SB-1: Biological Systems			
BENG 211: Systems Biology and Bioengineering I: Biological Components	X		
BENG 212: Systems Biology and Bioengineering II: Network Reconstruction		X	
BENG 227: Biomedical Transport Phenomena			X
Elective SB-2: Kinetic Modeling			
BENG 125: Modeling and Computation in Bioengineering			X
BNFO 284: Nonlinear Dynamics in Quantitative Biology (approved but it's not known when it will first be offered)			
PHYS 276: Quantitative Molecular Biology		X	
CHEM 220: Regulatory Circuits in Cells (anticipated to be offered in 2014-15)			
BIOMEDICAL INFORMATICS ELECTIVES			
Elective BMI-1: Biomedical Informatics			
MED 263: Bioinformatics Applications to Human Disease		X	
MED 266: Machine Learning in Biomedicine (offered odd years in spring; next is SP15)			SP15
MED 269: Clinical Decision Support Systems at the Point of Care (offered even years in winter; next WI14)		X	
The following BMI-1 electives are not 4 units:			
MED 265: Introduction to Clinical Environments (offered odd years in the fall) (2 units)	X		
MED 267: Modeling Clinical Data and Knowledge for Computation (offered even years in fall; next is FA14) (2 units)	FA14		
MED 276: Grant Proposal Writing Practicum (offered odd years in spring; next is SP15) (2 units)			SP15