Bioinformatics and Systems Biology Graduate Program

2010-11 Projected Course Offerings

Please note: Departments may change the quarter 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.

CORE COURSES	Fall	Winter	Spring
Bioinformatics I: Biological Data and Analysis (PHAR 201)	X		
Bioinformatics II: Introduction to Bioinformatics Algorithms (BENG 202/CSE 282)		X	
Bioinformatics III: Genomics, Proteomics, and Network Biology (BENG 203/CSE 283)			X
Bioinformatics IV: Statistical Methods in Bioinformatics (MATH 283)			X
BNFO 281: Seminar in Bioinformatics and Systems Biology (1 Unit)	X	X	
SOMI 226: Scientific Ethics, or BIOM 219: Ethics in Scientific Research (1 Unit)			X
Elective 1: Biochemistry			
BENG 230A: Biochemistry	X		
CHEM 209: Macromolecular Recognition	X		
CHEM 213: Chemistry of Biological Macromolecules			X
CHEM 216: Chemistry of Enzyme Catalized Reactions	X		
Elective 2: Molecular Genetics			
BICD 100: Genetics	X	X	X
BGGN 220: Graduate Molecular Biology	X		
BGGN 223: Graduate Genetics			X
Elective 3: Cell Biology			
BICD 110: Cell Biology	X	X	X
BICD 130: Embryos, Genes, and Development		X	
BGGN 222: Advanced Cell Biology		X	
CHEM 221: Signal Transduction		X	
Elective 4: Algorithms			
CSE 101: Algorithms	X	X	X
CSE 200: Computability and Complexity		X	
CSE 202: Algorithm Design and Analysis		X	X
CSE 280A: Algorithms in Computational Biology		X	
MATH 261A: Probabilistic Combinatorics and Algorithms (not offered this year)	-		
Elective 5: Machine Learning and Data Mining			
CSE 250A: Artificial Intelligence: Search and Reasoning	X		
CSE 250B: Artificial Intelligence: Learning		X	
CSE 254: Statistical Learning		X	
Elective 6: Bioinformatics and Systems Biology			
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 7: 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		

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Elective 8: Kinetic Modeling	**Fall**	**Winter**	**Spring**
BENG 125: Computational Bioengineering			X
PHYS 239: Special Topics: Quantitative Biology (not offered this year)	-		
BENG 213: Systems Biology and Bioengineering III: Large models			X
CHEM 220: Regulatory Circuits (not offered this year)			-
Elective 9: Medical Informatics			
MED 263: Bioinformatics Applications to Human Disease	X		
MED 264: Principles of Biomedical Informatics			X
MED 265: Healthcare Systems: A quantitative perspective		X	
MED 266: Biomedical Decision Support			X