

B.S. Dual Major for Computer Science and Biology

Revision of August 27, 2008

This degree program requires 139 SH of credit

The College of Computer and Information Science and the Department of Biology reserve the right to modify the curriculum described in this document or the individual courses as necessary in the future.

Computer Science (36 SH: 8 @ 4 SH, 4 @ 1 SH)	Biology (32-34 SH: 7 @ 4 SH, 4-6 @ 1 SH)
<i>Computer Science Required Courses (24 SH)</i>	<i>Biology Required Courses (19 SH)</i>
CS U200 Discrete Structures & CS U201 (0 SH)	BIO U101 Principles of Biology 1 & BIO U102 (1 SH)
CS U211 Fund of Computer Science 1 & CS U212 (1 SH)	BIO U103 Principles of Biology 2 & BIO U104 (1 SH)
CS U213 Fund of Computer Science 2 & CS U214 (1 SH)	BIO U301 Genetics and Molecular Bio & BIO U302 (1 SH)
CS U221 CS/IS Overview 1 (1 SH) or BIO U100 (1 SH)	BIO U701 Biology Capstone
CS U222 CS/IS Overview 2 (1 SH) or BIO U106 (1 SH)	
CS U370 Object-Oriented Design	<i>Integrative Course (Choose one – 4 or 5 SH)</i>
CS U430 Database Design	BIO G302 Bioinformatics Methods and Algorithms OR
	BIO G308 Genome and Proteome Analysis OR
<i>Integrative Courses (8 SH)</i>	BIO G309 ProteinStructure and Systems Biology OR
CS U390 Theory of Computation	BIO U521 Exp Design Marine Ecology & BIO U522(1 SH)
CS U690 Algorithms and Data	<i>Note: BIO G302 has been discontinued and so is no longer an option</i>
<i>Computer Science Elective Courses (4 SH)</i>	<i>Biology Elective Courses (8-10 SH)</i>
CS Elective 1	<i>Complete 2 Biology courses (with labs if offered) at level BIO U311 or above</i>
CS elective: CS U380 or higher, IS U535 or IS U570	BIO Elective 1
	BIO Elective 2
English (8 SH: 2 @ 4 SH)	
ENG U111 College Writing	<i>Students are normally expected to take at least 32 SH in Biology</i>
ENG U302 Adv Writing in the Technical Professions	
<i>With permission, may substitute ENG U301 for ENG U302</i>	
Mathematics (12 SH: 3 @ 4 SH)	Chemistry Courses (20 SH: 4 @ 4 SH, 4 @ 1 SH)
MTH U151 Calculus and Differential Eqns for Biology 1	<i>Complete the following courses with corresponding labs and recitations</i>
MTH U152 Calculus and Differential Eqns for Biology 2	CHM U211 General Chemistry 1 & CHM U212 (1 SH) & CHM 213 (0 SH)
MTH U481 Probability and Statistics	CHM U214 General Chemistry 2 & CHM U215 (1 SH) & CHM 216 (0 SH)
	CHM U311 Organic Chemistry 1 & CHM U312 (1 SH)
A&S Core Requirements (20 SH: 5 @ 4 SH)	CHM U313 Organic Chemistry 2 & CHM U314 (1 SH)
Category II: Methods of Inquiry	
<i>Choose PHL U215 Symbolic Logic</i>	General Electives (12 SH: 3 @ 4 SH)
<i>Choose one from Arts, Humanities, or Social World</i>	Elective 1
Category III: Diversity	Elective 2
<i>Choose one</i>	Elective 3
Category IV: Historical, Ethical, Aesthetic	<i>The Core curriculum courses and general electives must be consistent with the policy on general electives articulated by the College of Computer and Information Science in the Student Guidebook and on the college web site.</i>
<i>Choose one</i>	
Category V: Analysis	
<i>Choose SOC U528 Computers and Society</i>	
<i>Students may not fulfill any Core Requirements by taking courses in science, mathematics, or logic.</i>	