



## COMPUTER SCIENCE MAJOR

Professors: E. Mirielli, L. Webster

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The course offerings in Computer Science and Information Technology serve both Computer Science and Information Technology majors and students majoring in other fields. The introductory courses emphasize applications of computer and information technology for problem solving and data manipulation along with fundamental concepts of the computer science and information technology disciplines. The advanced courses are designed for extended study and exploration of the theoretical and technical aspects, and practical applications of computer science and information technology. The two majors offered by the Computer Science department will prepare students for either immediate employment or graduate study.

Computer Science and Information Technology courses are taught in a laboratory setting, permitting experimentation with the practical application of theoretical concepts. Students also present their work to various audiences in written, electronic, and verbal formats. In addition to the technical focus, students in both the CSC and ITY majors are provided opportunities to practice techniques to develop skills related to becoming professionals, effective communicators, and potential information technology leaders in a wide variety of organizations.

It is recommended that students planning graduate study in computer science take additional courses in mathematics and physics. Student learning is achieved by applying a problem-based, project centered approach focusing on critical thinking, technological understanding, and interpersonal communications. Majors must earn a grade of C- or better in all CSC/ITY courses.

A degree in Computer Science focuses on the mathematical logical, and scientific applications of computer science particularly algorithms and software development. Students are required to complete complementary courses in mathematics, statistics, and logic. Significant areas addressed in this major include secure coding empirical research, and data science. This major emphasizes problem-solving, computer programming knowledge and skills, software engineering concepts and practices, and provides the student with the opportunity to apply these concepts to a variety of computer-based systems.

If any substitutions of waivers of requirements are allowed, please list below and initial.

Course #	Title of Course	Hours Completed	Semester Completed	Grade

**MAJOR: Computer Science**


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Student's Last Name	First Name	Middle Initial
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Advisor	Date Major Declared
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Course #	Title of Course	Hours Required	Semester Completed	Grade
<b>Required Courses (32 hrs):</b>				
CSC 104	Programming Logic and Design	3		
CSC 111	Fundamentals of Computer Science I	3		
CSC 178	Survey of Computer Science	3		
CSC 211	Fundamentals of Computer Science II	3		
CSC 327	Database Management Systems	3		
CSC 350	Systems Analysis and Design	3		
ITY 177	Foundations of Information Technology Science	3		
ITY 181	Introduction to Software Engineering	3		
ITY 351	Systems and Software Engineering Laboratory	3		
MAT 124	Calculus I	5		
<b>Elective Courses (Total of 12 Hours)</b>				
<b>At least two elective courses (6 hours) must come from the following list:</b>				
CSC 201	Introduction to Digital Systems	3		
CSC 205	Visual Basic Programming	3		
CSC 390	Object-Oriented Programming	3		
CSC 411	Topics in Programming	3		
<b>Other elective courses (6 hours):</b>				
CSC 314	Advanced Digital Systems	3		
CSC 316	Compilers, Interpreters, and Operating Systems	3		
CSC 398	Independent Study in Computer Science	1-4		
CSC 399	Internship in Computer Science	1-4		
CSC 454	Computer Science Practicum	1		
CSC 427	Client Server and Web-based Programming	3		
ITY 232	Computer Networking	3		
ITY 415	Information Technology in the Organization	3		
<b>Additional Elective Courses (Any two below):</b>				
MAT 214	Calculus II	4		
MAT 215	Linear Algebra	3		
MAT 313	Mathematical Probability and Statistics	3		
PHL 224	Formal Logic	3		
<b>Total Hours for Major:</b>		<b>50-51</b>		