

# Computer Science Bachelor of Science Degree

*Chair:* Stephen Grodzinsky  
Engineering Technology Building  
(203) 576-4145

Today, computing is an enormously vibrant field. From its inception just half a century ago, computing has become the defining technology of our age. Computers are integral to modern culture and are the primary engine behind much of the world's economic growth. The field, moreover, continues to evolve at an astonishing pace. New technologies are introduced continually, and existing ones become obsolete in the space of a few years. The rapid evolution of the discipline has a profound effect on computing education, affecting both content and pedagogy.

Computer science core courses provide basic coverage of algorithms, data structures, software design, concepts of programming languages, and computer organization and architecture. Theoretical foundations, problem analysis, and solution design are stressed within the program's core materials. Students are exposed to a variety of programming languages and systems and become proficient in more than one higher-level language. A total of 130 semester hours is required for graduation.

## Summary of Requirements

### MATHEMATICS REQUIREMENTS

Math 110/112	Calculus I & II	8
Math 215	Calculus III	4
Math 323	Probability and Statistics	3
Math 214,	Math Elective	3
Math 314 <i>or</i>		
CS 340	Science Elective	4
		<b>30</b>

### GENERAL EDUCATION REQUIREMENTS

Engl C101	Composition & Rhetoric I	3
FA C101	Fine Arts	3
Phys 111, 112	Principles of Physics I, II	8
InSt C101	Computer Ethics	3
Engl 204	Technical Writing for Computer Science	1
Hum C201/C202	Humanities I & II	6
SoSc C201/C202	Social Science I & II	6
Caps C390	Capstone Seminar	3
	Humanities Electives (2)	6
		<b>31</b>

### CORE REQUIREMENTS

CS 101/101a	Introduction to Computing I	4
CS 102/102a	Introduction to Computer II (Data Structures)	4
CS 201	Advanced Data & File Structures	3
CS 203	2nd Programming Language	3
CS 227	Discrete Structures	3
CpE 210	Digital System Design I	3
CpE 286	Microprocessor System Design	3
CS 300	Economics & Management of Computing Projects	3
CS 301	Programming Languages	3
CS 329	Fundamentals of Algorithms	3
CS 311	Computer Architecture	3
CpE 408	Operating Systems	3
CS 449	Senior Design Project	4
CS 450	Database Design	3
CpE 471	Data and Computer Communications	3
CS 489	Software Engineering	3
	CS Elective (3)	9
	Technical Elective (2)	6
	Free Elective	3
		<b>69</b>

**Total Semester Hours 130**

## Suggested Program

### FIRST SEMESTER

Engl C101	Composition & Rhetoric I	3
Math 110	Calculus I	4
CS 101/101a	Int. to Computing I	4
Phys 111	Principles of Physics I	4

### SECOND SEMESTER

Math 112	Calculus II	4
Phys 112	Principles of Physics II	4
CS 102/102a	Introduction to Computing II (Data Structures)	4
InSt C101	Computer Ethics	3

### THIRD SEMESTER

CS 227	Discrete Structures	3
Math 215	Calculus III Physics/Chem/Bio	4
Hum C201	Humanities I	3
CS 201	Advanced Data & File Structures	3

### FOURTH SEMESTER

	Math Elective(214/314/340)	3
CS 203	2nd Language	3
Engl 204	Technical Writing For Computer Science	1
FA C101	Fine Arts	3
Hum C202	Humanities II	3
CpE 210	Digital System Design I	3

### FIFTH SEMESTER

CS 300	Economics & Management of Computing Projects	3
Math 323	Probability and Statistics	3
CS 301	Programming Languages	3
SoSc C201	Social Science I	3
CS 329	Fundamentals of Algorithms	3
CpE 286	Microprocessor System Design	3

### SIXTH SEMESTER

CpE 408	Operating Systems	3
	Humanities Elective I	3
CS	Elective I	3
SoSc C202	Social Science II	3
CS 311	Computer Architecture	3
	Technical Elective I	3

### SEVENTH SEMESTER

CS 450	Database Design	3
CpE 489	Software Engineering	3
CpE 471	Data and Computer Communications	3
	CS Elective II	3
	Technical Elective II	3
CS 449a	Senior Design Project	1

### EIGHTH SEMESTER

Caps C390	Capstone Seminar	3
	Free Elective	3
	CS Elective III	3
	Humanities Elective II	3
CS 449b	Senior Design Project	3

**Total Semester Hours 130**