

Programs and Objectives

Computer Science is concerned with information: its processing, storage, retrieval its communication, control, and manipulation as well as its analysis, recognition and display. This profession is concerned with computers and its organization and architecture, computer Systems design and information processing. It is a rapidly changing discipline encompassing computational systems and massive communications networks.

Graduates in this field can enter high technology workforce, and make significant contributions to computer systems through the research, design and development of a wide range of embedded systems. They can further the country's economic growth by developing innovative ideas, and translating them into products that benefit society. They can also function as team members and leaders in multidisciplinary environments.

Computer Science department encourage students with solid preparation in mathematics and the sciences to study this profession. The University prepares its graduates to compete in a fast-changing technological environment; the department has prepared a curriculum with a strong core of required courses in mathematics physical sciences, and engineering science. In addition, students have considerable freedom to choose electives in these and other areas of study.

The school has well equipped laboratory where students reinforce what is learned in the lecture halls with hands-on practical training. Hence, our graduates are industry ready and are prepared to face the challenges in industry.

First – Year Program

Pre-Engineering Courses

The Computer Science Department recommends the following sequence of courses:

Biology 90 Introduction to Biology (0 cr.)

The strategy of life: The basic properties of living Systems with emphasis on human beings as functioning Biological entities. Prereq. Math 80

English University Skills 1 (0 cr.)

This course is designed to prepare the students for successful performance in university courses. Assignment to this course is based on the level of competence indicated by the student's high school English record.

English University Skills 2 (0 cr.)

Evaluation of individual reading and study skills in English. Instruction and practice is based on individual basic reading Comprehension, vocabulary, and study skills to university Content areas.

Chemistry 90 Introduction to Chemistry (0 cr.)

The fundamental principles of chemistry and their applications to social issues. Problem solving in chemistry. Prereq. Math 80, Coreq. Math 90

Math 70 Elementary Algebra (0 cr.)

Review of arithmetic, algebraic expressions, Linear equations, monomial fractions, graphing lines, polynomials, verbal problems.

Math 80 Fundamentals of Algebra and Geometry (0 cr.)

Linear equations and graphs, functions, the point-slope equation, linear inequalities, polynomial functions, rational expressions, radicals, quadratic equations, sequences, series, and the binomial theorem. Prereq. Math70

Math 90 Intermediate Algebra and Trigonometry (0 cr.)

Rational expressions, rational exponents and radicals, conic sections and systems of equations, binomial

Math 100 Pre-calculus (3 cr.)

Intervals, inequalities, introduction to functions, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions and formulas Prereq. Math 90

Physics 100 Introductory Physics (0 cr.)

This course is with two themes:

1. How nature works the interplay of space, time, matter, and energy;
2. Structures are born, live out their life cycles, and die. These include us, the stars, and perhaps the universe. This theme may be called scientific story of genesis. Prereq. Math 80, Coreq. Math 90

First- Year (Freshman year)		Credits
First-Term		
Csc 100	Introduction to Programming and Computer Science	(3 cr.)
Math 101	Analytic Geometry and Calculus I	(3 cr.)
Chem 103	General Chemistry for Engineers	(3 cr.)
Engl 101	Freshman Composition	(3 cr.)
E. E. 124	Digital Electronics	(3 cr.)
Total		<u>15 cr.</u>
Second –Term		
Math 102	Analytic Geometry and Calculus II	(3 cr.)
Chem 104	General chemistry for Engineers II	(3 cr.)
Phys 108	General Physics II	(3 cr.)
CSc 102	Introduction to Computing	(3 cr.)
Csc 104	Discrete Mathematical Structures	(3 cr.)
Econ 101	Engineering Economics	(3 cr.)
Engl 102	Freshman Composition II	(3 cr.)
Total		<u>18 cr.</u>
Second-Year Program (Sophomore Year)		
First Semester		
Math 203	Analytic Geometry and Calculus III	(3 cr.)
CSc 210	Computer Architecture and Assembly Language Programming	(3 cr.)
CSc 212	Data Structures	(3 cr.)
CSc 217	Stochastic Models for Computer Science	(3 cr.)
Elective: History	African	(3 cr.)
Total		<u>15 cr.</u>
Second Semester		
Math 346	Elements of Linear Algebra	(3 cr.)
CSc 204	Discrete Mathematical Structures	(3 cr.)
CSc 221	Algorithms	(3 cr.)
CSc 221	Software Design Laboratory	(3 cr.)
Engl 210.7	Technical Communication	(3 cr.)
Total		<u>15 cr.</u>
Junior Year		
First Semester		

Phys 207	General Physics I	(4 cr.)
CSc 301	Numerical Methods in Scientific Programming	(3 cr.)
CSc 304	Introduction to Theoretical Computer Science	(3 cr.)
CSc 322	Software Engineering	(3 cr.)
Liberal Arts Course		(3 cr.)
Total		<u>16 cr.</u>
Second Semester		
Phys 208	general Physics II	(3 cr.)
CSc 332	Software engineering	(3 cr.)
CSc 335	Programming Language Paradigms	(3 cr.)
CSc 340	Logic Design and Switching Theory	(3 cr.)
Liberal Arts Course		(4 cr.)
Total		<u>16 cr.</u>
Senior Year		
First Semester		
Eco 104	Introduction to Quantitative Economics	(3 cr.)
CSc	Theory Elective	(3 cr.)
CSc	Algorithms Elective	(3 cr.)
Technical Elective		(3 cr.)
Liberal Arts Course		(3 cr.)
Total		<u>15 cr.</u>
Second Semester		
CSc	Computer Engineering Elective	(3 cr.)
Technical Elective		(3 cr.)
CSc	Computation Elective	(3 cr.)
		(3 cr.)
Liberal Arts Course		(3 cr.)
Csc 430	Computer Engineering Project	(3 cr.)
Total		<u>18 cr.</u>