



Department of Mathematics & Computer Science

Computer Science

About the Degree

The Computer Science (CS) degree provides students with a major focus in computer science, a broad-based general education, and a strong foundation in mathematics. The CS degree, like the Computer Information Systems (CIS) degree focuses on problem solving, analysis, design, and implementation of software systems.

Employment Opportunities

A degree in CS can lead to many different kinds of jobs dealing with computers and with people: computer programmer, software engineer, software architect, help-desk, networking specialist, computer-system manager, consultant, database analyst, computer training specialist, and others are all possible careers. It also prepares students for graduate work in CS or CIS.

Research Opportunities

Opportunities are provided for students to conduct research under the guidance of faculty members. Recent and on-going research projects include emerging technologies, advanced software applications, three-dimensional computer graphics, medical image processing, scientific computing, and search algorithms using the world-wide web. Research can be presented at the annual Arts and Sciences Symposium on Undergraduate Research.

Tutoring

Tutoring is available at the Student Success Center (<http://www.valdosta.edu/ssc/>), The Center is open seven days a week, at least 50 hours per week and offers free tutoring for introductory CS classes such as CS 1010, CS 1301, CS 1302, CS 2620, and CS 3410. Tutoring is provided by select, advanced CS and CIS students and supervised by a faculty member.

Computing Facilities

The CS Computer Lab consists of three areas and is open for more than 100 hours per week. The Main Lab consists of 25+ PC workstations. The Smart Lab consists of 20+ workstations that can access Linux, Solaris, or Windows servers. The Classroom Lab is a tiered room with 30+ PC workstations and overhead projection. This lab is available anytime there is no class meeting there. All instructional classrooms are equipped with a computer and projection system.

For students working on special projects, we also have the Debian Beowolf Cluster Lab which consists of 28 computers all acting simultaneously to complete given tasks by the master computer.

Minor in Computer Science

The Minor in Computer Science may be earned with 17 hours of course work. These courses are required: CS 1301, CS 1302, CS 3101, CS 3410, and one additional course at the 3000 level or above.

Co-op Program

The university provides many opportunities for cooperative education, which integrates classroom instruction with practical work experience. Students who participate can gain valuable experience in their chosen area prior to graduation, while also earning income to help pay for educational expenses. The department encourages students to co-op and has a faculty co-op coordinator to aid in the process. The program is very successful.

Required CS & Math Courses

CS 1010	Algorithmic Problem Solving (optional)
CS 1301	Principles of Programming I
CS 1302	Principles of Programming II
CS 2620	Discrete Structures
CS 3101	Computer Organization
CS 3300	Unix Programming
CS 3335	C Programming
CS 3410	Data Structures
CS 3520	Algorithms
CS 4121	Network Theory
CS 4321	Software Engineering
CS 4345	Operating Systems
CS 4500	Foundations of Computer Science
CS 4721	Database Systems
CS 4900	Senior Seminar
<i>choose 1:</i>	E-Commerce I, Web Programming
<i>choose 1:</i>	Networks II, Software Engineering II, Database II, E-Commerce II, Systems Programming; AI; Graphics, Programming Languages,
Math 1113	Precalculus
Math 2150	Linear Algebra
Math 2261	Calculus I
Math 2262	Calculus II
Math 3600	Probability and Statistics
<i>choose 1:</i>	Numerical Analysis, Operations Research

Sample Program

First Year		Second Year	
Fall (15)	Spring (15)	Fall (15)	Spring (15)
CS 1010* (3)	CS 1301 (4)	CS 1302 (4)	CS 2620 (3)
Math 1113 (3)	Math 2261 (4)	Math 2262 (4)	CS 3410 (3)
Engl 1101 (3)	Engl 1102 (3)	Engl 2xxx (3)	Math 2150 (3)
Pols 1101 (3)	Hist 2xxx (3)	Science (4)	Science (4)
Area C Elec (3)	Elective (1)		Pers 2xxx (2)
Third Year		Fourth Year	
Fall (15)	Spring (16)	Fall (15)	Spring (14)
CS 3101 (3)	CS 3520 (3)	CS 3335 (3)	CS 4xxx(3)
CS 3300 (3)	CS 4721 (3)	CS 4500 (3)	CS 4345 (3)
CS 4121 (3)	CS 3xxx (3)	CS 4900 (3)	Math 4xxx (3)
CS 4321 (3)	Math 3600 (3)	Area E Elec (3)	Elective (3)
Area E Elec (3)	Science (4)	Elective (3)	Pers 2xxx (2)

*Optional introduction to programming. If taken, counts as a free elective. Students with experience programming and/or a strong background in mathematics should start with CS 1301. In this case, replace CS 1010 with a free elective.

For More Information Call or Write:

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Visit our website at <http://www.valdosta.edu/mathcs>