



# Department of Mathematics & Computer Science

## Applied Mathematics

### About the Degree

This B.S. in Applied Mathematics degree provides students with a sound curriculum designed to be consistent with expanding uses of mathematics in business and industry. It is intended to be preparation for industrial or governmental employment or for the study of applied mathematics at the graduate level. Applied mathematicians use mathematical theories and techniques, such as mathematical modeling and computational methods, to formulate and solve real-world problems in business, government, and engineering, and in the physical, life, and social sciences.

### Employment Opportunities

A bachelor's degree in mathematics prepares students for a wide array of careers in research, education, industry, and government. Mathematics majors are employed in the following areas: Actuarial Science, Computer Science, Computer Programming, Information Technology, Education, Finance and Insurance, Agriculture, Forestry, and Operations Research.

### 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 Mathematics

The Mathematics and Computer Science Department offers a minor in Mathematics which requires 16-17 hours. The required courses are: Calculus 1 & 2, Set Theory, and three upper level electives.

A Computer Science major can obtain a Minor in Mathematics with the addition of just two courses: Set Theory and Calculus 3. The other requirements are met through the fulfillment of the CS degree requirements.

## Required Math & CS Courses

MATH 1113	Precalculus
MATH 2150	Introduction to Linear Algebra
MATH 2261	Analytic Geometry and Calculus I
MATH 2262	Analytic Geometry and Calculus II
MATH 2263	Analytic Geometry and Calculus III
MATH 3040	Set Theory
MATH 3340	Ordinary Differential Equations
MATH 3600	Probability and Statistics
MATH 4081	Modern Algebra I
MATH 4150	Linear Algebra
MATH 4260	Mathematical Analysis
MATH 4621	Mathematical Statistics I
MATH 4651	Numerical Analysis I
MATH 4901	Operations Research I
MATH 4910	Mathematical Models
<i>choose 1:</i>	Mathematical Statistics II, Topics in Applied Statistics, Numerical Analysis II, Operations Research II, Optics, Mechanics I, Electromagnetism I, Quantum Mechanics I
CS 1301	Principles of Programming I

## 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.

## Sample Program

First Year		Second Year	
Fall	Spring	Fall	Spring
Math 1113	Math 2261	Math 2262	Math 2263
Engl 1101	Engl 1102	CS 1301	Math 2150
Science	Science	Literature	Phys 2212
For Lang	For Lang	Phys 2211	Soc Sci
Pers	Pers		

Third Year		Fourth Year	
Fall	Spring	Fall	Spring
Math 3340	Math 3040	Math 4901	Math 4910
Math 3600	Math 4260	Math 4621	Math 4651
Elective	Math 4081	Math 4150	Math Elec
History	PolS 1101	Elective	Elective
Soc Sci	Elective	Elective	Elective

For More Information Call or Write:

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