



Department of Mathematics & Computer Science

B.A. Mathematics

About the Degree

This program provides students with a major in mathematics within the framework of a broad-based general education. This mathematics degree is intended as preparation for the study of mathematics (primarily theoretical or pure) at the graduate level. Theoretical or Pure mathematicians advance mathematical knowledge by developing new principles, and recognizing previously unknown relationships between existing principles of mathematics. Pure mathematicians seek to increase basic knowledge of mathematics without necessarily considering its practical applications.

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.

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.

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.

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 Beowulf 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	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 4980	Senior Seminar
<i>choose 2:</i>	History of Math, Modern Algebra II, Functions of a Complex Variable, Topology

choose 1:

CS 1010	Algorithmic Problem Solving
CS 1301	Principles of Programming I
CS 1340	Programming for Scientists

Also requires 27 hours of free electives which must include 6 hours at 3000 level or above in a single discipline outside the major, and an additional 3000 level course outside the major.

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	Soc Sci	Math 2150
For Lang	Humanities	For Lang	Math 3040
Soc Sci	For Lang	Literature	Comp Sci
Pers	History	elective	

Third Year		Fourth Year	
Fall	Spring	Fall	Spring
Math 3340	Math 4260	Math 4621	Math 4980
Math 3600	PolS 1101	Math 4081	Math Elec
Math 4150	Science	Math Elec	Elective
Science	Pers	Elective	Elective
Soc Sci	Elective	Elective	Elective

For More Information Call or Write:

Dr. Mylan Redfern, Head
 Department of Mathematics and Computer Science
 Valdosta State University
 Valdosta, GA 31698
 (229) 333-5778
mathcs@valdosta.edu

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