COMPUTATIONAL AND APPLIED MATHEMATICS (MS IN COMPUTATIONAL AND APPLIED MATHEMATICS)

The total credit hour requirement for the M.S. in Computational and Applied Mathematics (CAM) is 30 credits, which must be accumulated by completing a program of courses approved by the CAM graduate director. There is no thesis option for this degree.

Course Requirements

Students must complete 30 graduate credits consisting of 5 core (required) courses and 5 elective courses. A minimum of 18 credit hours must be taken at the 600 level.

Code	Title	Hours
Core Courses		**15**
CAM 606	Computing Methods	3
CAM 628	Linear Programming	3
CAM 696	Simulation and Modeling Project in CAM	3
MATH 524	Ops Resrch Stochastic Models	3
MATH 551	Probability	3

Students who have taken a similar course may petition the CAM graduate committee to approve an exemption from a core course. Students must provide a course syllabus. If approved, the CAM graduate committee will determine an appropriate course to substitute for the core course. Transfer credits are not allowed to substitute for core courses.

The following Mathematics courses may count towards the 30 credit hours and do not require the graduate credit permission form for a course taken outside of their program of study, MATH 524, MATH 551, MATH 552, and MATH 555.

Concentration Areas

Students will be required to select an area of concentration. Students will select a concentration in consultation with an advisor.

Operations Research

The purpose of the operations research concentration is to prepare students to identify, analyze, and solve real world problems. The coursework provides students with the knowledge and skills to transform data into insights to make better decisions. Students will be able to create and evaluate mathematical models that help organizations to solve complex problems and make the best decisions within dynamic and irregular informational contexts.

Code	Title	Hours
Required Course		3
CAM 668	Supply Chain Optimization	
or CAM 686	Optimization in Machine Learning	
Restricted Electives-select from the list below		12
CAM 616	Design of Experiments	
CAM 618	Models and Applications in OR	
CAM 626	Linear Regression	
CAM 638	Nonlinear Programming	
CAM 648	Integer Programming	
CAM 656	Reliability	
CAM 658	Discrete Optimization	
CAM 668	Supply Chain Optimization	
CAM 676	Statistical Analysis of Simulation Models	
CAM 678	Network Location Theory	
CAM 686	Optimization in Machine Learning	
CAM 688	Topics in CAM	
MATH 552	Mathematical Statistics	
MATH 555	Statistical Learning	

Students may petition the CAM graduate director to allow a graduate level course not on this list to count as an elective course for the concentration in Operations Research.

Student Designed

Students will be able to select courses to design a concentration area specific to career aspirations. Students will work in consultation with an advisor to design an area of concentration.

Code	Title	Hours
Required Course		3
CAM 668	Supply Chain Optimization	
or CAM 686	Optimization in Machine Learning	
Electives		12
Students will select courses from graduate level courses offered at the university. Students will select courses in consultation with their advisor. Courses must be approved by the graduate program director.		

Thesis Requirement

There is no thesis option for this degree.

Foreign Language Requirement

There is no foreign language requirement.

Satisfactory Progress

To be eligible to graduate, all students must achieve a cumulative grade point average of 3.0 on a 4.0 scale in all courses undertaken for graduate credit at William & Mary after admission to the M.S. degree program in Computational Operations Research. Students with less than a 3.0 average may appeal in writing to the COR graduate director. No credit toward a degree will be allowed for a course in which a student receives a grade below C (grade point = 2.0).

All requirements for the master's degree must be completed within six years from the first term of enrollment in the master's program, excluding periods of approved leave and military service. Requests for an extension beyond the six-year limit must be filed following the procedures outlined in Time Limits for Degrees and Extensions in the Graduate College of Arts & Sciences Catalog.