Course & Capstone Requirements:
(30 credits):
(Plans A, B and C are offered as options.)
The student and faculty advisor will work out an appropriate plan of study within the framework of the following requirements:
Actuarial Core (8 credits): ACTL 565 and 566

Additional courses as approved by the advisor, including:
a. 9 credits chosen from ACTL 480, 481, 482, 580
b. 9 credits designated STAT or MATH at the 400 or 500 level, and
c. 1-4 additional credits in actuarial science, mathematics, or statistics.

NOTE: No more than nine credits in the program may be earned in 400-level courses.

Capstone:
Plan A: Thesis (MATH 599, 6 credits) with 27 credits of course work
Plan B: Comprehensive Exam with 30 credits of course work
Plan C: Special Project in Mathematics (MATH 590, 3 credits) with 30 credits of course work

Program Rationale:
The Master of Arts in Mathematics with Specialization in Actuarial Science provides students with an understanding of the mathematical foundations of actuarial work and the professional development process. Consistent with this, the program provides course work which covers a substantial portion of the material on the first five examinations of the Society of Actuaries and the Casualty Actuarial Society. Students are encouraged to begin taking professional exams during their course of study. In conjunction with this, students are exposed to complementary disciplines, such as applied statistics or data mining.

Program Learning Outcomes:
Learning outcomes are consistent with those of the North American actuarial societies and the International Actuarial Association. Students in this program will be expected to:
• construct both deterministic and stochastic valuation models;
• have a working knowledge of insurance and financial instruments, including derivatives; and
• estimate both parametric and nonparametric models for frequency and severity and use the models to estimate the distribution of total losses and the probability of ruin.

Admission Requirements:
Applicants must hold a bachelor’s degree from a regionally accredited institution of higher education. Applicants must also have a minimum undergraduate GPA of 2.70 on a 4.00 point scale (where A is 4.00), or its equivalent, and good standing (3.00 GPA) in all post-baccalaureate course work.

The Department of Mathematical Sciences may, at its discretion, admit an applicant with a GPA between 2.40 and 2.70 on an unconditional basis provided that the prospective student has both sufficient undergraduate course work and standardized test scores that meet any of the following standards:
• GRE (math subject area): 600 (45th percentile)
• GRE (general test quantitative reasoning): 720 (80th percentile)
• GMAT (quantitative): 50 (95th percentile)

Contact: 860-832-2835 www.ccsu.edu/grad