MATHEMATICS (MS)

UConn's M.S. in Mathematics provides advanced training in pure, applied, or actuarial mathematics through 30 credits of coursework, with thesis and non-thesis options. Students benefit from close faculty mentorship and flexible degree paths tailored to academic or professional goals. The actuarial science concentration aligns with Society of Actuaries and CAS exams, allowing professional exam credit to count toward degree requirements.

Location

- Storrs Campus

Modality

- In Person

Requirements

Non-thesis students must either pass two written preliminary examinations at the level of a master's from a list of examination topics approved by the department, or pass an oral examination. Thesis M.S. students may choose the thesis option and write a master's thesis under the direction of a member of the Graduate Faculty in Mathematics.

Master of Science with Concentration in Actuarial Science

Students must pass at least five core courses from among:

Course	Title	Credits
MATH 5620	Financial Mathematics I	3
MATH 5630	Long-Term Actuarial Mathematics I	4
MATH 5631	Long-Term Actuarial Mathematics II	4
MATH 5637	Statistics for Actuarial Modeling	4
MATH 5638	Predictive Analytics for Actuaries	3
MATH 5639	Actuarial Loss Models	3
MATH 5640	Short-Term Insurance Ratemaking	3
MATH 5641	Short-Term Insurance Reserving	3
MATH 5650	Financial Mathematics II	4
MATH 5660	Advanced Financial Mathematics	3
MATH 5661	Yield Curve Models	3

The remaining coursework must come from a list of elective courses approved by the department. In addition, the student must either pass two written preliminary examinations at the level of a master's from a list of examination topics approved by the department or pass two actuarial examinations given by the Society of Actuaries or the Casualty Actuarial Society. The actuarial examinations may be passed prior to admission.

Learning Objectives

1. Knowledge: Demonstrate appropriate breadth and depth of disciplinary knowledge and comprehension of the major topics, theories, and issues of the discipline.
2. Applied skills: Uses, disaggregates, reformulates and/or adapts principal ideas, techniques or methods of the field of study ethically, professionally, and based on best practices of the discipline.
3. Communication: Communicate proficiently and effectively to a specialist or non-specialist audience, verbally and in writing, a coherent argument or explanation summarizing aspects of the discipline.