

Actuarial Mathematics III, Math 632

- **Purpose of Course**

The Math 630/631/632 sequence is designed to introduce students to the mathematical content of the theory of life contingencies. The sequence includes some material from several new Examinations of the Society of Actuaries and the Casualty Actuarial Society. The sequence is required for the undergraduate major in actuarial science.

- **Prerequisite**

Mathematics 631 or permission of instructor.

- **Text**

Actuarial Mathematics

2nd edition, Newton L. Bowers, Jr., et al, Society of Actuaries, 1997.

- **Syllabus**

Week 1	Multiple Decrement Models, Two Random Variables
Week 2	Random and Deterministic Survivorship Group, Single Decrement Tables
Week 3	Multiple Decrement Tables
Week 4	Actuarial Present Value, Benefit Premiums and Reserves
Week 5	Valuation of Pension Plans
Week 6	Disability Benefits with Individual Life Insurance
Week 7	Expense Argument Models
Week 8	Withdrawal Benefits, Types of Expenses
Week 9	Asset Shares, Expenses, Reserves and General Insurance
Week 10	Markov Chains

- **Grade**

Two midterms at 100 points each, and a final exam at 200 points. The course grade is based on the total 400 points.

- **Disability Statement**

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in f 50 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu>.

- **Academic Misconduct Statement**

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but riot limited to, cases of plagiarism arid dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee. For additional information, see the Code of Student Conduct (<http://studentaffairs.osu.edu/resource-csc.asp>).