

Actuarial Mathematics I, Math 630

- **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 Examinations of the Society of Actuaries and the Casualty Actuarial Society. The sequence is required for the undergraduate major in actuarial science.

- **Prerequisite**

Mathematics 618, and Mathematics 530 or Statistics 420 or Statistics 520 or equivalent; or permission of instructor.

- **Text**

Actuarial Mathematics

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

- **Syllabus**

- Week 1 Probability for the Age-at-Death
- Week 2 Life Tables, the Deterministic Survivorship Group
- Week 3 Other Life Table Characteristics, Assumption for Fractional Ages
- Week 4 Analytical Laws of Mortality, Select and Ultimate Tables
- Week 5 Insurance Payable at the Moment of Death
- Week 6 Insurance Payable at the End of the Year of Death
- Week 7 Differential Equations for Insurance Payable
- Week 8 Continuous Life Annuities
- Week 9 Discrete Life Annuities and m -thly Payments
- Week 10 Apportionable Annuities-Due and Complete Annuities-Immediate

- **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 not limited to, cases of plagiarism and 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>).