

## Theory of Interest, Math 618

- **Purpose of Course**

Undecided students looking to actuarial science as a possible course of study or profession may find this course to be a valuable indicator of their aptitude and interest. This course includes the material on the mathematics of compound interest in Examination FM of the Society of Actuaries and the Casualty Actuarial Society. The course is required for the undergraduate major in actuarial science.

- **Prerequisite**

Mathematics 254 or permission of instructor.

- **Text**

*Mathematics of Investment and Credit*

3rd Edition, Samuel A. Broverman, Actex Publications, 2004

- **Syllabus**

Week 1	Interest Accumulation, Effective Rates, Present Value and Equations of Value
Week 2	Nominal Rates, Effective and Nominal Rates of Discount, Force of Interest
Week 3	Level Payment Annuities and Generalizations
Week 4	Non-Constant Payment Annuities, Applications and Illustrations
Week 5	Amortization Method of Loan Payment
Week 6	Sinking Fund Method, Bond Prices
Week 7	Amortization of a Bond, Applications and Illustrations
Week 8	IRR, Dollar- and Time-Weighted Rate of Return, Applications and Illustrations
Week 9	Term Structure of Interest
Week 10	Duration and Immunization

- **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>).