

The Ohio State University
Colleges of the Arts and Sciences Course Change Request

Department of Mathematics
 Academic Unit

Math

618

Book 3 Listing (e.g., Portuguese)

Course Number

Summer Autumn X Winter Spring Year 2007

Proposed effective date: choose one quarter and put an "X" after it; and fill in the year. See the OAA curriculum manual for deadlines.

A. Course Offerings Bulletin Information. Follow instructions in the OAA curriculum manual. Before you fill out the "Present Course" information, be sure to check the latest edition of the *Course Offerings Bulletin* and subsequent Circulating Forms. You may find that the changes you need have already been made or that additional changes are needed. If the course offered is less than quarter or term, please also complete the Flexibly Scheduled/OffCampus/Workshop Request form.

COMPLETE ALL ITEMS THIS COLUMN

Present Course

1. Book 3 Listing: Math
2. Number: 618
3. Full Title: Theory of Interest
4. 18-Char. Transcript Title: Theory of Interest
5. Level and Credit Hours U G 3
6. Description: Mathematical techniques of use in analyzing (25 words or less)
 financial transactions involving interest: measurement of interest, force of interest, annuities-certain, application to actuarial science.
7. Qtrs. Offered : Au Qtr
8. Distribution of Contact Time: 2 1.5-hr cl.
 (e.g., 3 cl, 1 3-hr lab)
9. Prerequisite(s): 254 or permission of instructor
10. Exclusion: None
 (Not open to....)
11. Repeatable to a maximum of _____ credits.
12. Off-Campus Field Experience: None
13. Cross-listed with: None
14. Is this a GEC course? No
15. Grade option (circle): Ltr X S/U P
 If P graded, what is the last course in the series?
16. Is an honors version of this course available? No.
17. Other general course information:

**COMPLETE ONLY THOSE ITEMS THAT CHANGE
 Changes Requested**

- 1.
- 2.
- 3.
- 4.
5. U G 4
- 6.
- 7.
8. 2 2-hr cl.
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.
- 16.
- 17.

B. General Information

1. Do you want the prerequisites enforced electronically (see the OAA manual for what can be enforced)?
Yes.

2. Does this course currently satisfy any GEC requirement, if so indicate which category?
No.

3. What other units require this course? Have these changes been discussed with those units?
No other units require this course.

4. Have these changes been discussed with academic units that might have a jurisdictional interest in the subject matter? Attach relevant letters.
N/A

5. Is the request contingent upon other requests, if so, list the requests?
No.

6. **Purpose of the proposed change. (If the proposed change affects the content of the course, attach a revised syllabus and course objectives and e-mail to asccurrofc@osu.edu.)**
The proposed change does not affect the existing content of the course. The extra hour will be used to cover the added topics according to the change of the professional Exam FM by SOA/CAS, and used for problem solving that will help students to prepare for this exam.

7. Please list Majors/Minors affected by the proposed change. Attach revisions of all affected programs. This course is (check one):
 Required on major(s)/minor(s) A choice on major(s)/minors(s)
 An elective within major(s)/minor(s) A general elective:

8. Describe any changes in library, equipment or other teaching aids needed as a result of the proposed change or if the proposed change involves budgetary adjustments, describe the method of funding:
None.

Approval Process The signatures on the lines in ALL CAPS (e.g. ACADEMIC UNIT) are required.

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|--|--------------|------|
| 1. Academic Unit Undergraduate Studies Committee Chair | Printed Name | Date |
| 2. Academic Unit Graduate Studies Committee Chair | Printed Name | Date |
| 3. ACADEMIC UNIT CHAIR/DIRECTOR | Printed Name | Date |
| 4. After the Academic Unit Chair/Director signs the request, forward the form to the ASC Curriculum Office, 105 Brown Hall, 190 West 17 th Ave. or fax it to 688-5678. Attach the syllabus and any supporting documentation in an e-mail to asccurrofc@osu.edu . The ASC Curriculum Office will forward the request to the appropriate committee. | | |
| 5. COLLEGE CURRICULUM COMMITTEE | Printed Name | Date |
| 6. ARTS AND SCIENCES EXECUTIVE DEAN | Printed Name | Date |
| 7. Graduate School (if appropriate) | Printed Name | Date |
| 8. University Honors Center (if appropriate) | Printed Name | Date |
| 9. Office of International Affairs (study tours only) | Printed Name | Date |
| 10. ACADEMIC AFFAIRS | Printed Name | Date |

Prerequisite:

Mathematics 254, or permission of instructor.

Catalog Description:

Mathematical techniques of use in analyzing financial transactions involving interest: measurement of interest, force of interest, annuities-certain, applications to actuarial sciences.

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.

Text:

Mathematics of Investment and Credit, 3rd Edition, 2004, Samuel A. Broverman, ASA, Ph.D., Actex Publications.

Topics:

The minimum course content is:

1. Measurement of interest and discount, compound interest.
2. Force of interest, equations of value.
3. Annuities-certain, continuous annuities, varying annuities.
4. Amortization, numerical calculation of yield rates.
5. Valuation of securities.
6. Measurement of interest on a fund, life insurance settlement options, installment loans.
7. Depreciation, depletion, capitalized cost.

Course Coordinator:
C. Ban
2006-2007