

Course Number/Title: Math 162 (Theory of Interest)
Course Credit: 3 units
Prerequisites: Math 54

Textbook / References:

1. Broverman, S. *Mathematics of Investment and Credit (2nd ed)*. Actex Publications. 1996.
2. Hart, W. *Mathematics of Investment (5th ed)*. D.C. Heath and Company. 1980.
3. Kellison, S. *The Theory of Interest (2nd ed)*. Irwin. 1991.
4. Shao and Shao. *Mathematics for Management and Finance (8th ed)*. South-Western. 1998.

Course Objectives: At the end of the course, the student should be able to:

1. apply valuation principles to calculate the future and present values of a lump sum amount;
2. distinguish and apply discrete and continuous compounding of interest;
3. apply valuation principles to calculate FV and AV of series of cash flows;
4. apply the concept of annuity due and annuity immediate in amortization; and
5. compute for the price of bonds and stocks.

Course Requirements:

Two-thirds of the final grade will be based on 3 exams, 2 problem sets, boardworks and assignments (TBS). All these requirements are equally weighted and thus it is expected that students perform well in all these. The remaining one-third of the final grade will be based on the final examination.

Grading System:

1.00	93-100	2.50	70-74
1.25	90-92	2.75	65-69
1.50	87-89	3.00	60-64
1.75	84-86	4.00	50-59
2.00	80-83	5.00	Below 50
2.25	75-79	P/F	For Non Degree

Course Policy:

Attendance:

I check attendance. As per university rule, a student must not absent him/herself more than 20% of the total number of classes for the term. If most of his/her absences are excused, then the student must officially drop the course. Otherwise, if most of his/her absences are not excused then he/she will be given a grade of 5.0. Perfect attendance does not merit extra points in your grade.

It is important that students submit their excuse slip/letter (if applicable) as soon as possible after being absent. Failure to do this is a sign of irresponsibility.

Grades of 4 and Inc:

A student who gets a grade of 4.0 may take a removal exam within 3 regular removal periods or retake the course. A student who gets a grade of Inc. should complete all requirements within one academic year after receipt of grade. Retaking the course does not complete the course. In both cases, the student should inform the teacher as soon as possible regarding their mode of removal/completion.

Dropping:

A student is officially dropped from the course if he/she files a dropping slip and returns a slip to the teacher. A student who stops attending classes and/or taking exams without officially dropping will be given a grade of 5.0. Note that the teacher has the right not to sign your dropping slip.

Missed Examinations:

A student who misses an examination should immediately inform me personally. Depending the merits of the situation, a make-up exam may be given or the final grade will be used for that particular exam.

Cheating:

Cheating during examinations or problem sets is definitely not tolerated. Students caught cheating will automatically get a grade of 5.0 for the course, and the teacher may opt to file disciplinary charges against the student(s).

Proper Decorum:

It is expected that full attention to the teacher be given during class. Mobile phones and beepers should be turned off or kept in silent mode. Any activity, such as note passing, giggling, or private conversations, that will distract the teacher should be avoided.

Consultations:

If you have any questions regarding lessons discussed, feel free to visit me during my consultation hours. However, if you are not available during my designated consultation hours, we may arrange for another time schedule.

Mentor:

Jose Maria L. Escaner IV, Ph.D. (Associate Professor)
 MB 213. Website: <http://www.jlescaner.tk>

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Schedule of Classes

Meeting	Date	Topic
1	11/11/2008	Introduction; Accumulation and Amount Functions; Effective rate of interest
2	11/13/2008	Simple and Compound Interest Assumption
3	11/18/2008	Present value and Future value
4	11/20/2008	Other measures of interest and discount
5	11/25/2008	Forces of interest and discount; Summary
6	11/27/2008	Equation of Value; Unknown time
7	12/02/2008	Annuity-immediate and annuity-due
8	12/04/2008	Current values and perpetuities
9	12/09/2008	Summary
10	12/11/2008	Boardwork
11	12/16/2008	First Examination
12	01/06/2009	Annuities payable less frequently than interest is convertible
13	01/08/2009	Annuities payable more frequently than interest is convertible
14	01/13/2009	Continuous annuities; basic varying annuities
15	01/15/2009	Discounted cash flow analysis; Uniqueness of yield rate; reinvestment rates
16	01/20/2009	Interest measurement of a fund; Time-weighted rates of interest
17	01/22/2009	Portfolio methods and investment year methods
18	01/27/2009	Liquidation of Loan; Determining the outstanding loan
19	01/29/2009	Amortization Method; Sinking Fund Method
20	02/03/2009	Summary
21	02/05/2009	Boardwork
22	02/10/2009	Second Examination
23	02/12/2009	Introduction to Bonds-Stock Market; Price of a bond
24	02/17/2009	Premium and Discount
25	02/19/2009	Valuation between coupon payment dates
26	02/24/2009	Amortization of a Bond
27	02/26/2009	Exercises
28	03/03/2009	Determination of yield rates; callable bonds and serial bonds
29	03/05/2009	Term Structure of Interest Rates and Bond Valuation
30	03/10/2009	Bond Duration and Bond Default Risk and Premium
31	03/12/2009	Interest Rate as a Random Variable
32	03/17/2009	Continuous Stochastic Interest Rate Models
33	03/19/2009	Boardwork
34	03/24/2009	Third Examination