

NEW COURSE PROPOSAL

PROGRAM: BUSINESS

1. Catalog Description of the Course. *[Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ___ units); time distribution (Lecture ___ hours, laboratory ___ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]*

ECON/FIN 343. CAPITAL THEORY (3)

Three hours lecture per week.

Intertemporal choice and decision-making under uncertainty in our financial lives. Topics include: multiperiod consumption, multiperiod production, capital budgeting, modern portfolio theory and financial management.

GE-ID: D

2. Mode of Instruction.

	Units	Hours per Unit	Benchmark Enrollment
Lecture	<u>3</u>	<u>1</u>	<u>25</u>
Seminar			
Laboratory			
Activity			

3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) *[Use as much space as necessary]*

Elective course for BS in Business and Minor in Economics

This course provides a framework to make two related types of decisions. First, how do we make decisions today when the outcome of the decision is known, but does not occur until the future? Second, how do we make decisions when the outcome is uncertain? The tools to make these decisions come from the disciplines of economics and finance. In this course tools from economics, finance and statistics are developed and used to address these important types of problems.

Students who successfully complete this course will be able to:

- Use the three components of an economic optimization problem to define economic optimization problems.
- Solve economic optimization problems using the technique of marginalist decision-making.
- Perform calculations using the mathematics of finance including compounding (compound interest and future value) and discounting (present value).
- Describe the risks and returns of common investment vehicles including stocks, corporate and government bonds and real estate.
- Use the concept of compound interest to analyze strategies for wealth accumulation using common investment vehicles.
- Describe the three elements that determine the characteristics of a bond.
- Calculate the value of a bond using the techniques from the mathematics of finance.
- Integrate the techniques from economic optimization and the mathematics of finance to define and solve optimal timing problems.
- Integrate the techniques from economic optimization, the mathematics of finance and statistics to derive the basic results of modern portfolio theory.
- Use modern portfolio theory to determine appropriate investments to meet personal financial goals.

4. Is this a General Education Course
If Yes, indicate GE category:

YES

NO

A (English Language, Communication, Critical Thinking)	
B (Mathematics & Sciences)	
C (Fine Arts, Literature, Languages & Cultures)	
D (Social Perspectives)	X
E (Human Psychological and Physiological Perspectives)	

5. Course Content in Outline Form. *[Be as brief as possible, but use as much space as necessary]*

Introduction to Economic Optimizatoin

The three components of economic optimization problems
 Marginalist decision-making
 Applications

Introduction to the Mathmatics of Finance

Compounding and discounting
 Applications in wealth accumulation
 Applications in valuing government and corporatebonds

Integration and Applications of Economic Optimization and Mathematics of Finance

Intertemporal consumption
 Intertemporal production
 Capital budgeting
 Optimal timing problems

Introduction to Statistical Concepts

Means and variances
 Covariances and correlation

Integration and Application of Economic Optimization, Mathematics of Finance, and Statistics

Development of Modern Portfolio Theory (MPT)
 Application of MPT to meet personal financial goals

6. References. *[Provide 3 - 5 references on which this course is based and/or support it.]*

Bernstein, William. *The Four Pillars of Investing*. McGraw Hill. 2002.
 Malkiel, Burton. *A Random Walk Down Wall Street*. 7th edition. W. W. Norton. 1999.
 Muraoka, Dennis. "A Student's Guide to Economic Optimization." 2002.
 Muraoka, Dennis. "A Student's Guide to Capital Theory and Intertemporal Choice." 2002.
 Nicholson, Walter. *Intermediate Microeconomics and Its Application, 8th Edition*. Harcourt. 1999.

7. List Faculty Qualified to Teach This Course.

Dr. Dennis Muraoka

8. Frequency.

a. Projected semesters to be offered: Fall x Spring Summer

9. New Resources Required.

None.

10. Consultation.

Attach consultation sheet from all program areas, Library, and others (if necessary)

11. If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

_____Dennis Muraoka_____12/18/02_____

Proposer of Course

Date