

CURRICULUM CHANGE PROPOSAL

APPROVAL PAGE

Proposal Title: curriculum change in the risk management concentration

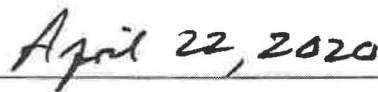
College: COBA

Department: Economics and Finance

DEPARTMENT CHAIR

I have read the enclosed proposal and approve this proposal on behalf of the department.





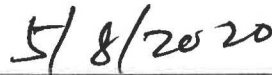
Signature

Date

COLLEGE CURRICULUM COMMITTEE CHAIR

I have read the enclosed documents and approve the proposal on behalf of the college curriculum committee.



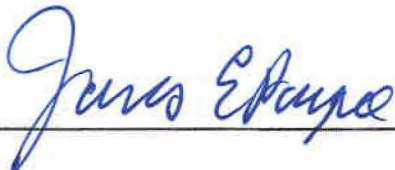


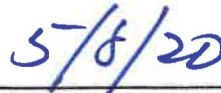
Signature

Date

COLLEGE DEAN

I have read the enclosed documents and approve the proposal on behalf of the college. I certify that the necessary funds will be allocated by the college in support of this proposal.





Signature

Date

UNDERGRADUATE CURRICULUM CHANGE MEMO

Date: 3/20/2020
From: Erik Devos, Economics and Finance
Through: Tim Roth, Economics and Finance
Through: James Payne, Dean COBA
To: Chair, Undergraduate Curriculum Committee

Proposal Title curriculum change in the risk management concentration

We are changing the risk management degree plan by deleting a course (financial econometrics) and by replacing it with a second course in actuarial finance. This is needed as we have found out that in order to properly prepare students for their chosen career and additional class in actuarial finance is more useful than a class in financial econometrics. Students who fall under earlier catalogues will be advised to take FIN 4341 instead.

Degree Plan BBA in Finance with a Concentration in Risk Management

The concentration in Risk Management within the BBA in Finance is built around the general concept of digital Integration. Digital integration applies the theory of Actuarial Science and Finance using common computer software (Excel, SAS, Eviews) with real world data, so that the students are prepared to perform on-the-job from day one. Academy Learning encourages students to interact, to improve their understanding of the material, and to model the personal interaction in the insurance industry. These concepts form the basis of the degree plan and model the skills used in the working environment of the business world.

Educational Objectives

1. Students will be prepped to take and pass two of the required exams to become an actuary: the P (Probability) and F/M (Financial Mathematics) exam, administered by the SOA. Students will be strongly encouraged to take the F/M exam in the Spring of their sophomore year and the P exam in the Spring of their junior year. Specific prep classes are part of the degree plan. In addition, the students will be prepped to take the MLC (Models for Life Contingencies) exam based on the material covered, after graduation. Second,
2. Students will have strong skills applying common computer software that is widely used in the insurance industry. They will be able to build complex Excel spread sheets, write VBA Excel macros, create statistical and forecast models in SAS, manipulate and organize large datasets in SAS and Excel, and develop actuarial models based on the life market. Finally, their
3. Business and interpersonal skills will be developed based on the Academy Learning design, business workshops, and through written reports and presentations.

Code	Title	Hours
Business Designated Core (All courses require a C or better.)		
<u>Complete the Business Designated Core requirements.</u>		
University Core Curriculum		
<u>Complete the University Core Curriculum requirements.</u>		42
Business Foundation (All courses require a grade of C or better)		
Required Courses:		
<u>ACCT 2301</u>	Principles of Accounting I	3
<u>ACCT 2302</u>	Principles of Accounting II	3
<u>ECON 2304</u>	Principles of Economics	3
<u>QMB 2301</u>	Fundamentals of Bus Statistics	3

Code	Title	Hours
<u>MATH 1312</u>	Calculus II	
<u>MATH 2313</u>	Calculus III	
Business Core		
Required Courses:		
<u>ACCT 3321</u>	Intermediate Accounting I ^c	3
<u>BLAW 3301</u>	Legal Environment of Business	3
<u>BUSN 3304</u> or <u>BUSN 3305</u>	Global Business Environment Global Busn Environ-Study Away	3
<u>ECON 3310</u>	Managerial Economics	3
<u>FIN 3310</u>	Business Finance	3
<u>MGMT 3303</u>	Intro-Mgmt/Organizational Beha	3
<u>MGMT 4300</u>	Strategic Management	3
<u>MKT 3300</u>	Principles of Marketing	3
<u>OSCM 3321</u>	Production/Operations Mgmt	3
Total Hours		120

Course List

Code	Title	Hours
Risk Management Concentration		
Required Courses:		
<u>FIN 3315</u>	Investments	3
<u>FIN 3317</u>	Principles of Insurance	3
<u>FIN 4310</u>	Managerial Finance	3
<u>FIN 4311A</u>	Managerial Finance Laboratory	1.5

Code	Title	Hours
<u>FIN 4315</u>	Portfolio Analysis	3
<u>FIN 4315A</u>	Portfolio Analysis Laboratory	1.5
<u>FIN 4316</u>	Analysis of Derivatives	3
<u>FIN 4340</u>	Actuarial Finance	3
FIN 4341	Actuarial Finance II	3
<u>QMB 3350</u>	Business Analytics	3
<u>QMB 3456</u>	Actuarial Quant Methods I	3
<u>QMB 4456</u>	Actuarial Quant Methods II	3
Total Hours		33

Replaced
FIN 4345

Course List

Edit Content from </shared/business-designated-core/>

Last Edited: Mar 5, 2020 12:15pm

Business Designated Core

Although the UTEP choice is larger, these choices satisfy the requirements of both the core and the major.

All courses listed within this degree require a grade of C or better for successful completion.

Code	Title	Hours
Mathematics		
Select one of the following:		
<u>MATH 1411</u>	Calculus I	
<u>MATH 1320</u>	Math for Social Sciences I	
<u>MATH 1508</u>	Precalculus	
Behavioral and Social Sciences		

Required:

Code	Title	Hours
<u>ECON 2303</u>	Principles of Economics	3

The following additional courses are also recommended:

<u>COMM 1302</u>	Business/Profession Comm	
<u>MATH 1320</u>	Math for Social Sciences I	
<u>PHIL 2306</u>	Ethics	

Course List

COURSE ADD

All fields below are required

College : COBA Department : E&F

Rationale for adding the course:

this course is added to the risk management degree plan in order to properly prepare students for their chosen career

All fields below are required

Subject Prefix and # FIN 4341

Title (29 characters or fewer): Actuarial Finance II

Dept. Administrative Code : 0802

CIP Code 52.1304

Departmental Approval Required Yes No

Course Level UG GR DR SP

Course will be taught: Face-to-Face Online Hybrid

How many times may the course be taken for credit? (Please indicate 1-9 times): 3

Should the course be exempt from the "Three Repeat Rule?" Yes No

Grading Mode: Standard Pass/Fail Audit

Description (600 characters maximum):

This class is the second class in the actuarial finance sequence, readying students for the FM exam

Contact Hours (per week): 3 Lecture Hours Lab Hours Other

Types of Instruction (Schedule Type): Select all that apply

- | | | | |
|---------------------------------------|-------------------|----------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> A | Lecture | <input type="checkbox"/> H | Thesis |
| <input type="checkbox"/> B | Laboratory | <input type="checkbox"/> I | Dissertation |
| <input type="checkbox"/> C | Practicum | <input type="checkbox"/> K | Lecture/Lab Combined |
| <input type="checkbox"/> D | Seminar | <input type="checkbox"/> O | Discussion or Review (Study Skills) |
| <input type="checkbox"/> E | Independent Study | <input type="checkbox"/> P | Specialized Instruction |
| <input type="checkbox"/> F | Private Lesson | <input type="checkbox"/> Q | Student Teaching |

Fields below if applicable

If course is taught during a part of term in addition to a full 16-week term please indicate the length of the course (ex., 8 weeks):

TCCN (Use for lower division courses) :

Prerequisite(s):		
Course Number/ Placement Test	Minimum Grade Required/ Test Scores	Concurrent Enrollment Permitted? (Y/N)
FIN 4340	C	N

Corequisite Course(s):

Equivalent Course(s):

Restrictions:	
Classification	
Major	

FIN 4341 Actuarial Finance II

Course Syllabus

Instructor: Chia-Chun Chiang

Location and Time: COBA 319 Monday/Wednesday 3:00 – 4:20 pm

Office: COBA 247

Office Hours: Monday/Wednesday 4:30 - 5:30 pm or by appointment

E-mail: cchiang@utep.edu

For faster replies, please use the prefix "FIN4341" in the subject line of all emails.

It is the policy of the finance department that all e-mails sent to professors or teaching assistants be of a professional nature and format. A formal greeting and salutation are required. Proper grammar, spelling, and format are required. You must clearly state the problem or question that will be addressed. You must identify the class, section, time, and location where the class meets. We reserve the right to not reply to any e-mail that does not meet these requirements and is not of a professional nature.

Prerequisite

FIN 4340 with "C" or better

Homework Assignment Software

Coaching Actuaries is an online software that allows students to submit homework assignments and check their work on line. Access to Coaching Actuaries is **required** for this course.

Calculator

Only calculators that are approved by the Society of Actuaries for use on Exam FM will be allowed to be used on exams in this class. I recommend Texas Instruments BA II Plus. I will use Texas Instruments BA II Plus in class and explain how to work various problems with it. Make sure that you bring your calculator to every class. Other calculators are approved: BA-35, BA II Plus Professional, TI-30Xa, TI-30X II (IIS solar or IIB battery), TI-30XS MultiView (or XB battery).

Course Description

This course is a quantitative course and focuses on the theory of interest (part II). The goal of this course is to prepare students for the Society of Actuaries Exam 2/FM. Upon completion of this course, students will have gained a deeper understanding of applications of financial mathematics.

Course Objectives

- Understand key concepts concerning bonds, and how to perform related calculations.
- Understand key concepts concerning yield curves, rates of return, and measures of duration

- and convexity, and how to perform related calculations.
- Understand key concepts concerning cash flow matching and immunization, and how to perform related calculations
- Understand key concepts concerning interest rate swaps and how to perform related calculations.
- Understand key concepts concerning the determinants of interest rates, the components of interest, and how to perform related calculations.

Blackboard

I will use Blackboard to post important announcements and upload course materials. I expect you to check Blackboard daily. Make sure you receive Blackboard announcement emails in your inbox.

Class E-Mail

Each student is required to have the e-mail account that is associated with the *Blackboard system* up to date. Any class requirements sent in the e-mail messages through the Blackboard are considered delivered. You should check that e-mail account regularly.

Grade Components

Exam 1	20 points
Exam 2	20 points
Exam 3	20 points
Final Exam	25 points
10 Assignments	15 points
Extra Credit	5 points
Total	105 points

Exams

If lowest score on Exams 1, 2 and 3 is less than Final Exam score, then the final exam score will be used in lieu of that low score. All exams will be closed-book, and no formula sheet is allowed (and on all SOA exams as well!). Students who miss an exam without a valid reason will receive a zero on that exam. Make-up exams will be allowed only with pre-approval of the instructor or with an acceptable, documented reason. Acceptable reasons for make-up exams include severe illness, family emergencies, or other unavoidable events, including dangerous weather conditions and car accidents. Exam format for make-up exams may be different from the original exam.

There will be a final exam during the scheduled final exam period. The final exam must be taken at the designated time. The only exceptions that will be made are for those students who have three or more exams scheduled on the same day, or two scheduled at the same time.

Assignments

The homework assignments aim to help you understand the theories covered in the class and to prepare you for the exams. You are allowed and encouraged to collaborate on these problems, although every student must submit their homework assignments through Coaching Actuaries.

Tentative Schedule and Outline (I reserve the right to revise it)

Week	Date	Topic
1	8/26	Introduction and Bond Market
	8/28	Bond Basics and Pricing (4.1)
2	9/2	Labor Day
	9/4	Bond Basics and Pricing
3	9/9	Premium and Discount (4.1)
	9/11	Bond Amortization (4.2)
4	9/16	Bond Amortization (4.2)
	9/18	Callable Bonds (4.3)
5	9/23	Exam 1
	9/25	Spot and Forward Rates (6.1 & 6.3)
6	9/30	Spot and Forward Rates (6.1 & 6.3)
	10/2	Interest Rate Swaps (FM-25-17)
7	10/7	Interest Rate Swaps (FM-25-17)
	10/9	Interest Rate Swaps (FM-25-17)
8	10/14	Determinants of Interest Rates (FM-26-17)
	10/16	Determinants of Interest Rates (FM-26-17)
9	10/21	Exam 2
	10/23	Duration (7.1)
10	10/28	Duration (7.1)
	10/30	Convexity (FM-24-17)
11	11/4	Redington and Full Immunization (FM-24-17)
	11/6	Redington and Full Immunization (FM-24-17, 7.2)
12	11/11	Immunization by Exact Matching (7.2)
	11/13	Exam 3
13	11/18	Internal rate of return and NPV (5.1)
	11/20	Internal rate of return and NPV (5.1)
14	11/25	Dollar and Time Weighted Rate of Return (5.2)
	11/27	Dollar and Time Weighted Rate of Return (5.2)
15	12/2	Dollar and Time Weighted Rate of Return (5.2)
	12/4	Final Review
16	12/9	Final Exam 1:00-3:45 pm

