


| | | |
|---|--|---|
|  FLORIDA ATLANTIC UNIVERSITY | NEW/CHANGE PROGRAM REQUEST Undergraduate Programs | UUPC Approval _____ UFS Approval _____ Banner Posted _____ Catalog _____ |
| | Department Mathematical Sciences College Charles E. Schmidt, College of Science | |

| | | |
|--|--|---|
| Program Name Actuarial Science Certificate | <input type="checkbox"/> New Program <input checked="" type="checkbox"/> Change Program | Effective Date (TERM & YEAR) Fall 2020 |
|--|--|---|

Please explain the requested change(s) and offer rationale below or on an attachment

Requested Change to the Actuarial Science Certificate:

Remove

RMI 3011- Principles of Insurance

and

Replace with

FIN 3403- Principles of Financial Management

The listing in the on-line catalog is located here:
<http://www.fau.edu/academic/registrar/FAUcatalog/science.php#certificates>

Please see attached for rationale and detailed request.

| | |
|--|---|
| Faculty Contact/Email/Phone Philip A. Pina, Jr./ppina@fau.edu/(cell) 305-502-9672, (work) 297-3340 | Consult and list departments that may be affected by the change(s) and attach documentation Department of Finance |
|--|---|

| | |
|---|--|
| Approved by Department Chair _____ College Curriculum Chair <i>J. E. King</i> College Dean <i>ERJ</i> UUPC Chair <i>J. E. King</i> Undergraduate Studies Dean <i>Edward Pratt</i> UFS President _____ Provost _____ | Date 04/27/2020 9/9/20 9-8-2020 9-15-20 9-15-20 _____ _____ |
|---|--|

Email this form and attachments to mjenning@fau.edu one week before the UUPC meeting so that materials may be viewed on the UUPC website prior to the meeting.



Charles E. Schmidt College of Science
Department of Mathematical Sciences
777 Glades Road
Boca Raton, FL 33431
tel: 561.297.3340
fax: 561.297.2436
www.math.fau.edu

April 10, 2020

Philip Andrew Pina, Jr.
Actuarial Science Advisor
Senior Instructor of Mathematics
Department of Mathematical Sciences

Requested Change to the Actuarial Science Certificate:

Remove

RMI 3011- Principles of Insurance

and

Replace with

FIN 3403- Principles of Financial Management

The listing in the on-line catalog is located here:

<http://www.fau.edu/academic/registrar/FAUcatalog/science.php#certificates>

Below are images with the detailed instructions on the proposed changes for the course catalog.

Current Course Catalog Listing

Actuarial Science Certificate

Actuarial Sciences is a career that is in high demand. Actuaries are professionals who use their mathematical training to solve problems in insurance and finances. The certificate requires 15 credits of prerequisite courses and 24 credits of required courses, with at least 18 of these credits taken at FAU.

| Prerequisites | | |
|--------------------------|----------------------|----|
| Calculus 1, 2 and 3 | MAC 2311, 2312, 2313 | 12 |
| Macroeconomic Principles | ECO 2013 | 3 |

| Requirements | | |
|---------------------------------|----------------|---|
| Microeconomic Principles | ECO 2023 | 3 |
| Actuarial Mathematics 1 | MAP 4172 | 3 |
| Actuarial Mathematics 2 | MAP 4173 | 3 |
| Internship-Actuarial Science | MAP 4945 | 6 |
| Principles of Insurance | RMI 3011 | 3 |
| Probability and Statistics 1, 2 | STA 4442, 4443 | 6 |

It is recommended that students also complete STA 4234, STA 4202L and STA 4702. These courses will prepare students for the third actuarial exam.

Proposed Catalog Changes

Actuarial Science Certificate

Actuarial Sciences is a career that is in high demand. Actuaries are professionals who use their mathematical training to solve problems in insurance and finances. The certificate requires 15 credits of prerequisite courses and 24 credits of required courses, with at least 18 of these credits taken at FAU.

| Prerequisites | | |
|--------------------------|----------------------|----|
| Calculus 1, 2 and 3 | MAC 2311, 2312, 2313 | 12 |
| Macroeconomic Principles | ECO 2013 | 3 |

| Requirements | | |
|------------------------------------|---------------------|---|
| Microeconomic Principles | ECO 2023 | 3 |
| Actuarial Mathematics 1 | MAP 4172 | 3 |
| Actuarial Mathematics 2 | MAP 4173 | 3 |
| Internship-Actuarial Science | MAP 4945 | 6 |
| Principles of Insurance | RMI 3011 | 3 |
| Probability and Statistics 1, 2 | STA 4442, 4443 | 6 |

RMI 3011-Principles of Insurance should be replaced with FIN 3403 Principles of Financial Management

It is recommended that students also complete STA 4234, STA 4202L and STA 4702. These courses will prepare students for the third actuarial exam.

Revised Catalog Listing

Actuarial Science Certificate

Actuarial Sciences is a career that is in high demand. Actuaries are professionals who use their mathematical training to solve problems in insurance and finances. The certificate requires 15 credits of prerequisite courses and 24 credits of required courses, with at least 18 of these credits taken at FAU.

| Prerequisites | | |
|--------------------------|----------------------|----|
| Calculus 1, 2 and 3 | MAC 2311, 2312, 2313 | 12 |
| Macroeconomic Principles | ECO 2013 | 3 |

| Requirements | | |
|---|-----------------|---|
| Microeconomic Principles | ECO 2023 | 3 |
| Actuarial Mathematics 1 | MAP 4172 | 3 |
| Actuarial Mathematics 2 | MAP 4173 | 3 |
| Internship-Actuarial Science | MAP 4945 | 6 |
| Principles of Financial Management | FIN 3403 | 3 |
| Probability and Statistics 1, 2 | STA 4442, 4443 | 6 |



It is recommended that students also complete STA 4234, STA 4202L and STA 4702. These courses will prepare students for the third actuarial exam.

Rationale: FIN 3403-Principles of Financial Management covers many topics needed for Actuarial Math 2--a problem solving capstone course in the Actuarial Science Certificate Program designed to prepare students for a credible first effort on the CAS/SOA Exam FM/2 Financial Mathematics. Moreover, this change had already been approved years prior, passed by faculty senate, but not recorded in the course catalog. This "change" has been recorded on the mathematics department page for many years. In addition, FIN 3403 satisfies VEE educational requirements of the SOA/CAS (see below).

Note1: FIN 3403 has formal prerequisites of ACG 2021 and ACG 2071 however, the Mathematics Department and Department of Finance have a longstanding agreement to waive the course prerequisites via petition for mathematics majors pursuing the Actuarial Certificate late in their programs, e.g. Seniors or late Juniors, as the needed material is covered in the first chapter of the finance course and mathematics majors in the Actuarial Certificate Program to date have typically obtain grades of A or A- without the accounting prerequisite courses being taken. That being said, for students committed to pursuing an Actuarial career, it is **in a student's best interest** whenever possible to take the accounting courses as the CAS/SOA (Casualty Association of America/Society of Actuaries) have VEE (Verification of Educational Experience) requirements for finance and accounting. FIN 3403, ACG 2021, and ACG 2071 satisfy VEE course requirements in accounting and finance when obtained with grades of B- or higher.

Note2: If we were to include the two accounting courses as part of the certificate (one as a prerequisite and the other as a requisite course) it would result in the actuarial certificate having a requirement of 42 credits though again most of the coursework satisfies some form of VEE requirement.

Note3: Coursework Currently Approved or Eligible for VEE approval

VEE Economics- ECO 2012, ECO 2023

VEE Accounting and Finance- ACG 2021, ACG 2071, FIN 3403

VEE Mathematical Statistics-STA 4442, STA 4443