

# Undergraduate Academic Certificate in Actuarial Science (MATH MAJOR TRACK)

## Prerequisite Courses

- MATH 1710 and 1720 (Calculus I and II)
- MATH 2700 (Linear Algebra) and MATH 2730 (Multivariable Calculus)
- ECON 1100 and 1110
- CSCE 1010, 1020 or 1030 (CSCE 1040 is also encouraged, but not required)
- Either MATH 3680, ECON 4630, or DSCI 3710
- FINA 3770 -- Note that FINA 3770 has ACCT 2010/2020 as prerequisites. Students in the Actuarial Science Program who have completed both MATH 1710 and ECON 1100 with grades C or better may request a letter from an Undergraduate Mathematics Advisor allowing enrollment in FINA 3770 without having to first take the ACCT 2010/2020 prerequisites. The student is then responsible for independently learning the required accounting background.

## Required Courses (MATH major track)

Math majors must take **ALL** the following economics and finance courses as requirements of the actuarial certificate:

- ECON 4870, FINA 4200 **AND** FINA 4210.

Math majors must also take **THREE** additional courses selected from among the following:

- FINA 4300, FINA 4310, or FINA 4400; FINA 4310 is recommended.
- RMIN 2500 or any 4000-level RMIN class; recommended courses are RMIN 2500, RMIN 4200, and RMIN 4310.
- ECON 4030, ECON 4180, and ECON 4875.

## Recommended Courses (MATH major track)

Math majors are recommended to take the following math classes as part of their mathematics major:

- Strongly recommended: MATH 3410, 3740, 4600, 4610, 4650.
- Recommended: MATH 3350, 3420.

## Actuarial Exams

The actuarial certificate is designed to prepare students for the preliminary actuarial exams as follows:

- Exam 1/P: Math 4610. Students are encouraged to attempt this exam as soon as possible after completing Math 4610
- Exam 2/FM: FINA 3770, FINA 4210, and MATH 4600 (Financial Math)
- VEE (Validation by Educational Experience) – Economics: ECON 1100 and 1110
- VEE – Applied Statistical Methods: ECON 4870 and 4030
- VEE – Corporate Finance: FINA 3770 and FINA 4200

## Additional Information and Opportunities

- Students are also encouraged to seek **internships** that may be pursued in conjunction with RMIN 4800. For more information on obtaining internships, feel free to contact the UNT Internships Office (Chestnut Hall 155, 565-2861, internships.unt.edu, internships@unt.edu).
- Students are encouraged to participate in the UNT Insurance club in the Finance Department.
- More information about the actuarial exams, the VEE requirements, careers in actuarial science, and internship opportunities may be found at [www.beanactuary.org](http://www.beanactuary.org), [www.soa.org](http://www.soa.org) and [www.casact.org](http://www.casact.org).

# Undergraduate Academic Certificate in Actuarial Science (NON-MATH MAJOR TRACK)

## Prerequisite Courses

- MATH 1710 and 1720 (Calculus I and II)
- MATH 2700 (Linear Algebra) and MATH 2730 (Multivariable Calculus)
- ECON 1100 and 1110
- CSCE 1010, 1020 or 1030 (CSCE 1040 is also encouraged, but not required)
- Either MATH 3680, ECON 4630, or DSCI 3710
- FINA 3770 -- Note that FINA 3770 has ACCT 2010/2020 as prerequisites. Students in the Actuarial Science Program who have completed both MATH 1710 and ECON 1100 with grades C or better may request a letter from an Undergraduate Mathematics Advisor allowing enrollment in FINA 3770 without having to first take the ACCT 2010/2020 prerequisites. The student is then responsible for independently learning the required accounting background.

## Required Courses (NON-MATH major track)

Non-math majors must take **ALL** the following economics finance, and mathematics courses as requirements of the actuarial certificate:

- ECON 4870, FINA 4200, FINA 4210, **AND** MATH 4610

Non-math majors must also take **TWO** additional courses selected from among the following:

- MATH 3350, MATH 3410, MATH 3740, MATH 4600 and MATH 4650; MATH 4600 (a preparation for SOA Exam 2/FM) and Math 4650 is recommended. (Students contemplating graduate work in computational finance should also take MATH 3410 and 3420.)
- FINA 4300, FINA 4310, or FINA 4400; FINA 4310 is recommended.
- RMIN 2500 or any 4000-level RMIN class; recommended courses are RMIN 2500, RMIN 4200, and RMIN 4310.
- ECON 4030, ECON 4180, and ECON 4875.

## Actuarial Exams

The actuarial certificate is designed to prepare students for the preliminary actuarial exams as follows:

- Exam 1/P: Math 4610. Students are encouraged to attempt this exam as soon as possible after completing Math 4610
- Exam 2/FM: FINA 3770, FINA 4210, and MATH 4600
- VEE (Validation by Educational Experience) – Economics: ECON 1100 and 1110
- VEE – Applied Statistical Methods: ECON 4870 and 4030
- VEE – Corporate Finance: FINA 3770 and FINA 4200

## Additional Information and Opportunities

- Students are also encouraged to seek **internships** that may be pursued in conjunction with RMIN 4800. For more information on obtaining internships, feel free to contact the UNT Internships Office (Chestnut Hall 155, 565-2861, internships.unt.edu, internships@unt.edu).
- Students are encouraged to participate in the UNT Insurance club in the Finance Department.
- More information about the actuarial exams, the VEE requirements, careers in actuarial science, and internship opportunities may be found at [www.beanactuary.org](http://www.beanactuary.org), [www.soa.org](http://www.soa.org) and [www.casact.org](http://www.casact.org).