Actuarial Science Courses (Statistics and Actuarial Science) (ACTS)

This is a list of all actuarial science courses. For more information, see Statistics and Actuarial Science.

ACTS:1000 First-Year Seminar 1 s.h.
Small discussion class taught by a faculty member; topics chosen by instructor; may include outside activities (e.g., films, lectures, performances, readings, visits to research facilities). Requirements: first- or second-semester standing.

ACTS:1001 Introductory Seminar on Actuarial Science 1 s.h.
Introduction to actuarial science; U.S. actuarial organizations and actuarial qualification process; program requirements and tips for academic success; career center, actuarial club, and internships; actuarial career; ethics; communication; introduction to actuarial computing. Requirements: actuarial science interest major and first-year standing.

ACTS:3080 Mathematics of Finance I 3 s.h.
Mathematics of compound interest, annuities certain, amortization schedules, yield rates, sinking funds, and bonds. Prerequisites: STAT:3100 with a minimum grade of B-. Requirements: meet the prerequisite or have graduate standing.

ACTS:3110 Actuarial Exam P Preparation 1 s.h.
Preparation for the Society of Actuaries exam P.

ACTS:3210 Actuarial Exam FM Preparation 1 s.h.
Preparation for the Society of Actuaries exam FM. Corequisites: ACTS:3080, if not taken as a prerequisite.

ACTS:4110 Actuarial Exam LTAM Preparation 1 s.h.

ACTS:4130 Quantitative Methods for Actuaries 3 s.h.
Survival distributions, life tables, life insurance, introductory stochastic processes. Offered fall semesters. Prerequisites: STAT:3100 with a minimum grade of B- and ACTS:3080 with a minimum grade of C+. Requirements: multivariate calculus and linear algebra.

ACTS:4160 Topics in Actuarial Science arr.
Selected topics in actuarial science, financial mathematics, and quantitative risk management not covered in other courses.

ACTS:4180 Life Contingencies I 3 s.h.
Life annuities, net and gross premiums, net and gross premium reserves, modified reserve methods, and Markov chains. Offered spring semesters. Prerequisites: ACTS:3080 with a minimum grade of C+ and ACTS:4130 with a minimum grade of C+ and (STAT:4100 with a minimum grade of C+ or STAT:5100 with a minimum grade of C+).

ACTS:4280 Life Contingencies II 3 s.h.
Multilife models, multiple-decrement models, continuous-time Markov chain models, profit testing, and profit measures. Offered fall semesters. Prerequisites: ACTS:4180 with a minimum grade of C+.

ACTS:4380 Mathematics of Finance II 3 s.h.

ACTS:4990 Readings in Actuarial Science arr.

ACTS:6160 Topics in Actuarial Science arr.
Selected topics in actuarial science, financial mathematics, and quantitative risk management not covered in other courses; a required course for all final-year M.S. students in actuarial science. Prerequisites: ACTS:4180 with a minimum grade of C+ and ACTS:4380 with a minimum grade of C+.

ACTS:6480 Loss Distributions 3 s.h.
Severity, frequency, and aggregate models and their modifications; risk measures; construction of empirical models. Offered spring semesters. Prerequisites: STAT:5101 or STAT:4101. Corequisites: ACTS:6580.

ACTS:6580 Credibility and Survival Analysis 3 s.h.

ACTS:6990 Readings in Actuarial Science arr.
Supervised reading and research in actuarial science, financial mathematics, or quantitative risk management.

Selected topics in actuarial science, financial mathematics, and quantitative risk management not covered in other courses.