The University of Texas at Dallas Actuarial Science Program

**Actuarial Science**

Any student possessing strong problem-solving skills and interest in a challenging and respected business career should consider the actuarial profession. Actuarial science applies statistics, mathematics, economics, finance, government policies, and business management principles to assess risks in the insurance and finance industries.

**Actuaries**

Actuaries are professionals who use their knowledge of statistics, finance, and business to define, analyze and solve business problems involving the cost of possible future events, such as stock market performance or income from insurance policies and pension plans. An actuary’s goal is to balance financial success with an acceptable level of risk.

**Actuarial Work**

The insurance industry is the largest employer of actuaries, but they also work in financial institutions, consulting firms, government agencies, universities, accounting firms and labor unions. Emerging markets for actuaries include banking, retirement systems, mortgage companies, health care, and public health industries.

Examples of actuarial work include projecting how a new auto-safety law will change insurance claims, estimating the benefit cost of a labor contract, projecting financial costs of an epidemic, and analyzing investment risk.

**Preparation**

An individual becomes an actuary by passing a series of challenging exams administered by either the Society of Actuaries (SOA) or the Casualty Actuarial Society (CAS). A degree in actuarial science prepares students for this demanding set of requirements.

**UT Dallas Actuarial Science Program**

Recognizing the utmost importance of providing a strong actuarial education, The University of Texas at Dallas built a first-class actuarial science program that has committed itself to attain the Society of Actuaries accreditation as a Center of Actuarial Excellence.

A dedicated group of experienced actuaries, mathematicians, statisticians, economics, and finance professionals is ready to help the students achieve their educational and career goals. The University of Texas at Dallas offers a Bachelor of Science (BS) and a Master of Science (MS) in Actuarial Science. Both undergraduate and graduate programs are administered through The Department of Mathematical Sciences.

Acknowledging the absolute necessity of having passed actuarial exams to enter the workforce in actuarial industry, both undergraduate and graduate programs have curricula specifically designed to prepare the students for passing actuarial exams.

**Undergraduate Actuarial Science Program**

In our Bachelor of Science degree program students receive a rigorous mathematical background including all the major courses taken by students majoring in mathematics or statistics. Further, ten courses are devoted to finance, economics, applied statistics, insurance, and actuarial science. All students are prepared to take three actuarial preliminary exams (Probability – P/1, Financial Mathematics – FM/2, Models in Financial Economics – MFE/3F) and achieve Validation of Educational Experience (VEE) credits in applied statistical methods, economics, and corporate finance.
Students also receive rigorous instruction in preparation for a major part of the two additional actuarial preliminary exams (Models in Life Contingencies – MLC/3L and Construction and Evaluation of Actuarial Models – C/4). Upon completion of this program, a student will have the knowledge and business background necessary to pursue a career as an actuary, as well as to undertake graduate study in actuarial science, statistics, mathematics, economics or finance.

**Minor in Actuarial Science**

The Minor in Actuarial Science program is ideal for students who are interested in broadening their experience and knowledge base in the study and analysis of principles of Actuarial Science. The minor core courses prepare students for a number of actuarial exams required for a designation of Associate of either the Society of Actuaries, the Casualty Actuarial Society, or the Canadian Institute of Actuaries. Specifically, the minor provides students with an intense background in principles of actuarial models. All of the courses in the minor serve as starting points for learning the concepts covered on the preliminary actuarial exams (P/1, FM/2, MLC/3L).

**Graduate Actuarial Science Program**

The objective of our Master of Science degree program is to educate future leaders of the actuarial industry with training in actuarial theory and methods in a wide spectrum of actuarial applications involving probabilistic and statistical models. A particular emphasis on life and health insurance, property and casualty insurance, and employee benefit programs is placed through advanced actuarial classes offered by actuarial professionals. All students are prepared to take five actuarial preliminary exams (P/1, FM/2, MFE/3F, MLC/3L, and C/4) and achieve Validation of Educational Experience (VEE) credits in applied statistical methods, economics, and corporate finance.

With this combined knowledge of probability, statistics, and decision theory as well as of financial mathematics and insurance, the expected passing of five actuarial exams, and the three required VEE credits, graduates of the program will be able to work as senior actuaries in insurance, consulting, finance, government, and emerging markets.

**Careers and Internships**

Students in the UT Dallas actuarial programs are encouraged to hold internships and participate in networking events throughout their college career. UT Dallas offers many tools to students to help them find — and obtain — internships and jobs, including a dedicated career center that can help with resume building and interviewing skills. Using their extensive professional connections with consulting firms and insurance companies locally and nationwide, the actuarial faculty at UT Dallas actuarial program organizes events designed to help the UTD community to meet actuaries and other professionals related to actuarial science. Building these connections helps students and graduates find internships and employment opportunities.

The UT Dallas location is a huge advantage for our actuarial science students. Dallas is a major hub for insurance companies and actuarial consulting firms, and many of these companies hire actuarial interns and professionals. UT Dallas students have held internships at TowersWatson, Liberty Mutual, Lewis & Ellis, SwissRe, Blue Cross Blue Shield, Torchmark Corporation, Austin Capital Retirement Plan Services, Cigna, USAA, and other companies.

**Supporting Projects**

Recognizing the importance of developing practical skills that will serve the students well when they start their careers, The UT Dallas Actuarial Program offers several projects for actuarial students that are designed to develop specific technical and business skills relevant to both actuarial consulting and the insurance industry. These projects have been field-tested to enhance existing actuarial programs as well as to provide practical skill sets necessary for successful job searching.

**Financial Aid**

The UT Dallas Actuarial Science Program provides scholarships for qualified students as well as examination fee reimbursement.

**Student Organizations**

The Actuarial Student Organization (ASO) was created to provide support to all students at The University of Texas at Dallas and in the Dallas-Fort Worth area who are interested in actuarial science. Its goals are to collectively orchestrate a group that will aid students in preparing for the actuarial exams needed for the profession, bring in professional guest speakers to enlighten its participants with their experiences as actuaries, and collaborate with each other in seeking future employment opportunities.

**Join Us**

The UT Dallas Actuarial Science Program provides its students with academic preparedness through exam preparation and practical experience, professional placement through internships and entry-level positions and financial support through scholarships and exam fees reimbursement, thus creating a tremendous competitive advantage in a job search. A stimulating, nurturing and caring environment makes the pursuing of the actuarial academic degree one of the most rewarding experiences in the students lives.

- website: http://www.utdallas.edu/math/
- email: utdmath@utdallas.edu