

## What is an Actuary?

An actuary is a business professional who analyzes the financial consequences of risk. Actuaries use mathematics, statistics, and financial theory to study uncertain future events, especially those of concern to insurance and pension programs. Actuaries may work for insurance companies, consulting firms, government, employee benefits departments of large corporations, hospitals, banks and investment firms, or, more generally, in businesses that need to manage financial risk. A career as an Actuary is better described as a "business" career with a mathematical basis than as a "technical" mathematical career.

## Why would I want to be an Actuary?

Actuaries describe their work as challenging and interesting and generally enjoy a good working environment. The *Jobs Rated Almanac* has consistently rated "Actuary" as one of the top two or three jobs on a variety of factors. (To check the current rating, click [The 250 best professions.](#) ) According to several studies, the profession is more open than others to women and members of under-represented minority groups. Actuaries are in high demand, with starting salaries ranging from \$45,000 to \$55,000. The salary increments are based both on experience and exams passed. The increments can be quite large and may actuaries earn in triple digits. Most "well qualified" graduates (i.e. those with a 3.2 GPA and one exam) receive a number of job offers.

## How can I become an Actuary?

To become an "Actuary", you must become an Associate, and ultimately a Fellow, of one of the professional societies by passing a series of examinations administered by them. The largest of the professional groups is the Society of Actuaries (SOA), the organization for actuaries working in life and health insurance, employee benefits, and pensions. The Casualty Actuarial Society (CAS) is the organization for actuaries working in automobile, fire, and liability insurance and workers' compensation. The American Society of Pension Actuaries is the organization for actuaries working in the pension field, in particular, those actuaries who certify to the federal and state governments that pension plans are sound.

Entry into the profession is very competitive and success in the field demands commitment and hard work during college and the few years after graduation when the actuarial exams are being taken. Potential employers suggest the minimum requirements for hiring are a 3.2 GPA or higher and at least 1 actuarial exam. The qualities sought in applicants are high technical ability, good communications skills, and a broad background including courses in mathematics, statistics, business, and the liberal arts.

The actuarial exams, administered by the SOA and the CAS, cover a variety of subjects of importance in the insurance industry. Exams cover probability, interest theory, risk management, life contingencies, as well as topics that are more specific to insurance. For more information on exams, see the [Be An Actuary exams page.](#)

**Actuarial Science students take a substantial number of mathematics and statistics courses as well as courses that cover actuarial topics. In addition to the courses required for graduation, students should carefully consider electives that will coordinate with an actuarial career. In particular, additional courses in economics, computer science, or courses in writing and communication are very helpful for an actuarial career. The goals of the program include that students be well prepared for the exams they take, that they be knowledgeable about the career and in technical areas, and that they have a well-rounded education. In addition, many students will have passed the Course 1 exam by January of their Junior year to help when applying for internships, and at least one more exam by January of their Senior year when they are applying for permanent jobs.**