



Find Your Dream Job in Actuarial Work

Risk management is a critical aspect of the modern business world, and actuarial employment is the job of assessing risks, assigning probabilities, and making judgments based on the assessed risks. Actuaries are in many ways prophets of the business world, though perhaps if more of them had been listened to in the last three years, the economy would not be in quite the disastrous shape it is in now. Nearly every field has actuary science jobs to be filled, from healthcare to insurance to investing. Even quality assurance, traffic management, and building inspections have actuary career paths.

One of the great questions of actuary science is proper assessment of risks. An actuary cannot realistically prevent the bad consequences from happening from a poorly thought out decision, but they are obligated to inform their employers of risks in the ventures about to be undertaken. [Actuarial jobs](#) inform decisions on things like insurance rates and policies cost-benefit structures for construction.

The classic example of actuarial science is trying to spread the risk of certain behaviors across a population group. For example, the likelihood that you will be the causative agent in a car accident drops dramatically after you get past the age of 25, and is highest in the 16–18 age demographic, especially for males. The corroboration that establishes this is assembled by actuarial tables looking at the abstracts of all automotive insurance accidents in a given calendar year. The consequence of those actuarial tables is that the cost of auto insurance premiums drops after you get to the age of 25.

Similarly, the likelihood that a person will have an expensive medical procedure varies with age and gender, with women between the ages of 16 and 28 being likelier to go through a pregnancy than women who are older; older people are likelier to suffer compound medical ailments and certain other risk factors (obesity, diabetes, and alcohol and tobacco consumption being the big ones).

While those are the big risk factors, actuaries work in other fields as well. Insurance is the largest employer, but did you know that actuaries are also consulted on laying pipe in buildings? The cost of ripping out pipe and replacing it after a building is completed is expensive, as any homeowner knows. It is even worse for a commercial building with multiple tenants. An actuary will usually be consulted on the cost of higher-quality plumbing (which eats into the construction budget, which is always tight) and the cost of replacing it later after a certain span of years. The same principle applies with pollution controls: there are fines for polluting, but in some cases, the fines are less expensive than putting in the

pollution controls, and on a strictly cost-to-benefit, risk/rewards ratio, those choices may not have the answers that you would think are the better choice.

The most difficult part of actuarial work comes from analyses that statisticians call high-amplitude, low-frequency events. An example of this type of event is being hit by lightning; while it is terribly infrequent, it is usually catastrophic if it happens.

On the other hand, actuarial science has to deal with psychology as well as statistics. People are likelier to respond to things they get involved with emotionally than with any rational assessment of risk. This is why, even though the number of deaths per 100,000 among soldiers serving in Iraq and Afghanistan is lower than the same age set of demographics dying in auto accidents in the U.S., we have protests to stop the war and bring the troops home, while people are merging into traffic on alternating feeds from onramps while driving seventy miles per hour without a second thought. This impact on actuarial science is one of the things that makes an [actuarial career](#) a challenging one. It is much more than just dry statistics and numbers.

As a job, actuarial sciences are appealing to people who want to know things. If you are the sort of person who peeks at the end of books, or who always reads the instructions before assembling a piece of furniture, you may have the temperament for an actuarial job, and it may be ideally suited to you.

[Actuary positions](#) are also strongly math dependent. Getting a degree in actuarial science is strongly recommended; actuarial science is heavily based on high-end statistics and some differential and integral calculus. Other skill sets that are useful for actuarial careers include basic business knowledge, and, if working with environmental or engineering concerns, enough knowledge of those fields to make informed decisions.

Actuaries are well compensated. Typical salaries start at \$40,000 but generally require a master's degree, and can go



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into the low six figures. The field is generally rated as one of the top five in the country for overall job satisfaction and professional growth. Actuarial jobs result in positions where you work normal office hours and the problems you get

presented with tend to be intellectually engaging. One actuary described the demands of the job as somewhat akin to being a mathematician who has to work for his living.

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