Baruch COLLEGE
The City University of New York

STARR Career Development Center

Spotlight on BA in Actuarial Science

Career Options

- Accountant/Auditor
- Actuary
- Bank Officer
- Chief Executive Officer
- Economist
- Financial Planner
- Government and Public Service Worker
- Investment Banker
- Policy Analyst
- Researcher
- Statistician
- Venture Capitalist/Investor

What is Actuarial Science?

Actuarial Science is the analysis of mathematical data to predict the likelihood of certain events, such as death, accident, or disability. Essentially, actuarial science is the statistical and mathematical underpinning of every kind of insurance on earth: health insurance, life insurance, property insurance, pension plans, etc. Insurance companies are the main employers of actuaries. Actuaries determine how much the insurers charge for policies.

Occupational Opportunities

Over seven-tenths of actuaries are employed in the insurance industry. Some have jobs in life and health insurance companies, while property and casualty insurance companies, pension funds, or insurance agents and brokers employ others. Of the remaining actuaries who do not work in the insurance industry, they tend to work for firms providing a variety of corporate services, especially management and public relations, or for actuarial consulting services. A relatively small number of actuaries are employed by security and commodity brokers or by government agencies. Some actuaries develop computer software for actuarial calculations.

Skills & Abilities

The preferred style for those in actuarial science is rational, analytical and detail-oriented. These careers typically require proficiency in data collection, manipulation and analysis and database management, often done with sophisticated computer software programs. Because computers are the most important tools for in-depth data analysis, advanced training and experience in computer programming is typically required. High proficiency in mathematics and numerical computation is essential. Related major skills and characteristics are:

- Numerical computation
- Analysis and interpretation of data
- Critical thinking
- Computer literacy
- Systemizing skills
- Efficiency and accuracy
- Ability to work independently and in teams

- Logical thinking
- Problem solving
- Organize and detail-oriented
- Strong oral & written communication
- Integrity, honesty, and thoroughness
- Commitments to professional ethics

The Department of Mathematics is located on the 6th Floor of the William and Anita Newman Vertical Campus in room 6-230. You can contact them at 646-312-4110.

Baruch COLLEGE
The City University of New York
STARR Career Development Center

One Bernard Baruch Way
Box B2-150
New York, NY 10010
www.baruch.cuny.edu/careers

Career Snapshot: Actuary

Actuaries in the insurance industry calculate the probability that there will be a return on their investment. To do this, they consider probabilities of death, dismemberment, disability, or property loss. Actuaries are the reason teenagers driving sports cars pay such prohibitively high premiums. Actuaries ensure that insurance prices will enable the company to pay all claims and expenses and that the price yields a profit. Once they reach upper-level management positions, actuaries are often called upon to determine and implement complex company policies. Actuaries also often testify in court to verify the loss incurred by a policyholder who has been disabled or killed and in divorce cases as to the current value of pension benefits. Actuaries may also appear before public agencies to contest legislation that affects their businesses. These professionals also work as independent consultants who are hired by insurance companies, corporations, hospitals, labor unions and health care providers for their advice.

Due to the breadth of topics they may work on, it is important for the actuary to keep current with many different industries and fields. Actuaries earn competitive salaries from the time they start and are paid for every hour of credit that they earn from "actuarial exams." Actuaries spend up to eight months a year studying for these exams, which test everything from specific knowledge (casualty insurance, life insurance, pension services) to linear algebra, probability, calculus, statistics, risk theory and actuarial mathematics. Actuaries are pressured to complete the entire series of examinations as soon as possible in order to advance in the field. The first set of exams brings the actuary to the associate level and takes four to six years to complete. Preparation for the exam requires hours of study outside of work, dramatically impacting the social and personal lives of potential actuaries. Actuaries can spend up to 10 years or more taking exams and studying to reach the title of fellowship, particularly if they stop along the way to get married and have a family. The long hours required to gain titles and prestige in the actuarial field do not go unrewarded—starting salaries are very high and continue to climb for more experienced actuaries.

Additional Resources

U.S. Government's Occupational Outlook Handbook
http://stats.bls.gov/oco

Actuary – the leading source of actuarial science information, actuarial jobs and more.
www.actuary.com

D.W. Simpson Global Actuarial Recruitment – a great resource for finding a job in the actuarial science field.
www.actuaryjobs.com

Be An Actuary – this site provides an overview of the actuarial profession and is used to promote the actuarial science career.
www.beanactuary.org

Society of Actuaries
www.soa.org

American Academy of Actuaries
www.actuary.org

Casualty Actuarial Society
www.casact.org

Make the Difference
www.makingthedifference.org/federalcareers

Math for America
www.mathforamerica.org

Revised and updated by LOC&JM 2011. Information was obtained from the following sources:
The College Board Book of Majors. (2004); The Princeton Review Guide to College Majors (2005 Edition); The College Majors Handbook by N.P. Fogg, P.E. Harrington, & T.F. Harrington (1999 & 2004 Editions); The College Board Guide to 150 Popular College Majors (1992); Vault College Career Bible (2005 Edition); Quick Guide to College Majors & Careers by L. Shatkin (2002).