What is an actuary?

- “A mathematician who uses statistics to calculate insurance premiums”

- “A person qualified to calculate commercial risks and probabilities involving uncertain future events, esp. in such contexts as life assurance”
  – *Collins English Dictionary, 10th ed.*

- “A person who calculates insurance and annuity premiums, reserves, and dividends”
  – *Merriam-Webster online dictionary*

- “Actuaries are the analytical backbone of our society’s financial security programs”
  – [www.beanactuary.org](http://www.beanactuary.org)
What is an actuary?

- Actuaries are professionals who quantify risk and find ways to manage it
  - Insurance example: Setting premium rates for auto insurance
  - Consulting example: Managing the cost of pension benefits to be paid 40 years from now
- Actuarial work is critical to the financial well-being of governments, corporations, and individuals
- Consistently rated as one of the top jobs in the United States, based on criteria such as:
  - Employment outlook/job security
  - Income level
  - Stress/work environment
Two credential-granting societies in the United States

• The Society of Actuaries
  – The Society of Actuaries is an educational, research and professional organization dedicated to serving the public and Society members.
  – www.soa.org

• Casualty Actuarial Society
  – The Casualty Actuarial Society is a professional organization whose purpose is the advancement of the body of knowledge of actuarial science applied to property, casualty, and similar risk exposures.
  – www.casact.org
There’s really only one way to become an actuary…

- Pass actuarial exams offered by the SOA and CAS!
  - Multiple-choice and written-answer
- Two levels of actuarial credentials:
  - Associate (ASA or ACAS)
  - Fellow (FSA or FCAS)
- Some other actuarial designations:
  - Chartered Enterprise Risk Analyst (CERA)
    - ASA-level designation offered by SOA
  - Enrolled Actuary (EA)
    - Designation for pension actuaries required to practice before IRS
  - Member of American Academy of Actuaries (MAAA)
    - Often required to attest to certain government filings
    - Indicates formal adherence to actuarial Code of Professional Conduct
Society of Actuaries Education System

ASA Requirements

• Pre-requisites not tested directly – 5 subjects
  – Calculus, Linear Algebra, Introductory Accounting, Business Law, Mathematical Statistics

• Validated Education Experience (VEE) – 3 subjects
  – Economics, Corporate Finance, Applied Statistics

• Preliminary Education (PE) exams (5 exams)
  – Probability (P), Financial Math (FM), Financial Economics (MFE), Life Contingencies (MLC), Actuarial Models (C)
  – All exams are 3 to 4 hours in length

• Fundamentals of Actuarial Practice (FAP)
  – 8 interactive modules with 2 assessment exercises

• Associate Professionalism Course (APC)
# Society of Actuaries Education System

## FSA Exams & Modules

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Skills needed to become an actuary

Just passing the exams will make you an actuary. Possessing many of the qualities above will make you a successful one.
Estimated median compensation for actuaries (salary + bonus)

Note: Compensation may vary significantly according to specialty, years of experience, geographic region, and responsibilities.