## A Career As an Actuary

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## Risk

Possibility of an undesirable event
 We prevent risk by:

 Various insurance plans
 Car inspections
 Health checkups



## Actuary

#### Actuaries prevent risk



## Top Ten Jobs

#### The Ten Best Jobs in the United States:

- Biologist
- Actuary
- Financial Planner
- Computer-System Analyst
- Accountant
- Software Engineer
- Meteorologist
- Paralegal Assistant
- Statistician
- Astronomer

## Outline

Definition of an Actuarial Career Level of Education Actuarial Exams Tasks of an Actuary Where an Actuary Works Salaries of an Actuary Sample Exam Problems

## **Definition of an Actuarial Career**

Actuaries prevent risk
Find new ways of avoiding risk
Implement and protect financial programs

Examples

## Level of Education

Strong background in mathematics and statistics
Analytical skills
General business knowledge

## **Actuarial Exams**

#### Nine exams total

- Some companies hire actuarial students without completion of an exam
- Can study for exams while an actuarial student
- Don't even need a degree in mathematics or statistics



# **Actuarial Exams**

#### Finance

- Microeconomics
- Macroeconomics
- 3 semesters of calculus
- 1 semester of linear algebra
- 2 semesters of probability and statistics
- Business courses
  - Marketing
  - Accounting
- Computer Science courses

#### Communication courses

- Technical writing
- Speech
- Drama
- Liberal Arts courses
  - Literature
  - History
  - Art
  - Political science
  - Humanities
- Actuarial science classes, as available

# **Actuarial Exams**

Exam	Subject		
1	Mathematical Foundations of Actuarial Science		
2	Interest Theory, Economics, and Finance		
3	Actuarial Models		
4	Actuarial Modeling		
5	Introduction to Property and Casualty Insurance and Ratemaking		
6	Reserving, Insurance Accounting Principles, and Reinsurance		
7	Nation-Specific: Annual Statement, Taxation, and Regulation – Canada or U.S.		
8	Investments and Financial Analysis		
9	Advanced Ratemaking, Rate of Return, and Individual Risk Rating Plans		

## Designations

Society of Actuaries, SOA Life, health, finance, investments and pensions Casualty Actuarial Society, CAS Property and casualty Associate Associate of the Society of Actuaries, ASA Associate of the Casualty Actuarial Society, ACAS Fellow Fellow of the Society of Actuaries, FSA Fellow of the Casualty Actuarial Society, FCAS

### Tasks of an Actuary

Analyzing insurance rates Estimating amount of money for claims Participating in corporate planning Calculating a fair price for a new insurance policy Forecasting the potential impact of catastrophes Analyzing investment programs

#### Where an Actuary Works

**Insurance companies** Consulting firms Government insurance departments **Colleges and universities** Banks and investment firms Large corporations and public accounting firms Self-employment

## Salaries of An Actuary

Actuary Type	Huntsville, AL	Orlando, FL	Birmingham, AL
Ι	\$41,992	\$42,213	\$42,301
II	\$51,216	\$51,485	\$51,593
III	\$65,626	\$65,971	\$66,109
IV	\$82,193	\$82,625	\$82,798
V	\$94,312	\$94,808	\$95,006

## Salaries of An Actuary

Salary depends on test performance Fellow Salary \$150,000 to \$250,000 per year In 2002, new Associate actuaries earned more money than a person with **MBA** 



## Sample Exam Problems

Spring 2003 Exam 1