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participant code:
1701393

Glimpse into the world of actuarial science

What the future will hold

- ✓ Overview of actuarial science
- ✓ Decide our fate
- ✓ Work on an actuarial science case study together

Overview of Actuarial Science

Impressions of actuarial science

Actuary: What do you think of?

What is an actuary?

Actuaries help find ways to **manage risk**. They are integral to entities that deal with risk, such as the insurance industry. Financial security programs also could not thrive without actuaries.

Actuaries are experts at

- **Evaluating** likelihood of future events
- **Designing** ways to reduce likelihood of undesirable events
- **Decreasing impact** of undesirable events that occur

Actuaries are known to be **self-motivated**, **creative**, **independent** yet **collaborative**, **ambitious** individuals.

www.beanactuary.org/what-is-an-actuary

Why be an actuary?

Desirable Career

2025 U.S. News & World Report rankings of actuarial scientist:

#5 in Best Technology Jobs, **#7** in Best STEM Jobs, **#10** in 100 Best Jobs

Job Market Demand

U.S. Bureau of Labor Statistics: employment of actuaries is projected to **grow 22%** from 2023 to 2033; much faster than average for all occupations.

Competitive Salary

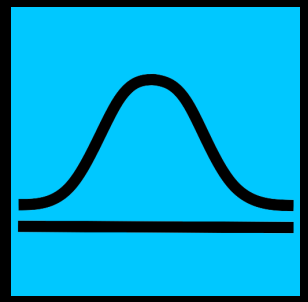
U.S. News, 2023:

Q1	Median	Q3
$88,420	$120,000	$164,320

Credentialing: Exams

Probability (P)

Take: MA 381



Financial Mathematics (FM)

Take: MA 111-113
ECON S254

Property, casualty, risk

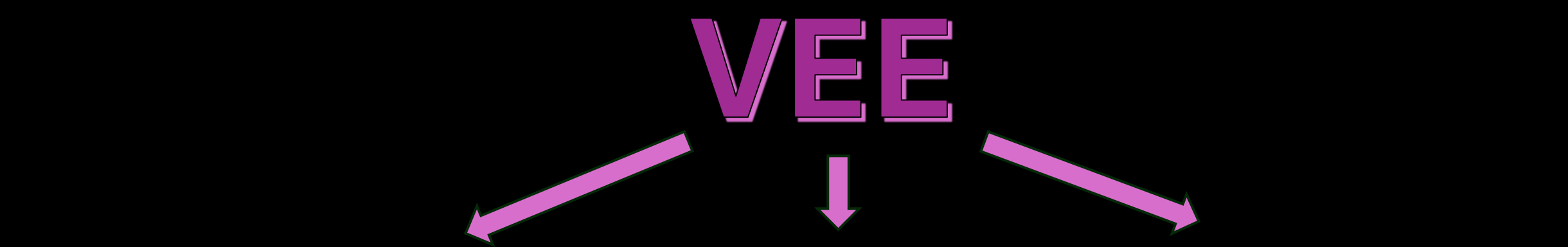
Larger society; life, health, +

7 more exams

4 more preliminary exams + 3 specialty exams

Any exams that you take and pass while enrolled as an undergraduate student at Rose-Hulman will be reimbursed by the Mathematics department!

Credentialing:
Validation by Educational Experience



Economics
ECONS151 or ECONS251
ECONS152 or ECONS252

Accounting & Finance
ECON S352
EMGT M521*

Math. Statistics
MA 481

Take these courses while you are a student. They can count for this required credit after you have passed 2 exams.

https://www.soa.org/education/exam-req/edu-vee/

Supports for actuarial science

Calculus for three terms	(MA 111, MA 112, MA 113)
Linear Algebra	(MA 371 or MA 373)
Probability	(MA 381)
Statistics	(MA 223, MA 481)
Communication	(ENGL H290, ENGL H230, ENGL H371)
Microeconomics	(ECON S151, ECON S251)
Macroeconomics	(ECON S152, ECON S252)
Finance	(ECON S254, ECON S352, ECON S355, ECON S451)
Computer science	(CSSE 120)
Business	(ECON S253, EMGT M520)
Liberal Arts courses	(many options in HSSA)

https://www.beanactuary.org/college-study/what-to-study/

See the Moodle page

https://moodle.rose-hulman.edu/course/view.php?id=88504

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Case Study

Worksheet also in github

https://meganheyman.github.io/