Becoming an Actuary
Quick Overview

Jan 22, 2022

https://www.uakron.edu/statistics/actuarial-science/
What Does Actuary Do?

• Models and Measures Risk, and determines the price of various insurance products.

• Distribution of the Risk, Law of Large Numbers, Central Limit Theorem.

• Roll are expanding into non-traditional risk managements.
How to become an Actuary

• Bachelor’s Degree. (ActSci, Statistics, Math, Finance, etc.)

• Passing Exams P and FM will make you marketable for entry-level positions.

• Internships are very important. (Posting starts Aug-Sep for following Summer)

• http://BeAnActuary.com/
• https://www.uakron.edu/statistics/actuarial-science/
SOA – 7 prelim exams to be an Associate
https://www.soa.org

(Exam structures changes every couple of years)

* All VEE courses can be taken at UA
SOA – From Associate to Fellow

(Takes 7-10 years to complete after graduation)
CAS – 7 Prelim Exams to Become an Associate

Same as SOA exam (will change after 2022)

https://www.casact.org/admissions/process/
CAS or SOA?

• Major Types of Actuary

<table>
<thead>
<tr>
<th>Property &amp; Casualty</th>
<th>Life/Health</th>
<th>Pension/Retirement</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS</td>
<td>SOA</td>
<td>SOA</td>
<td></td>
</tr>
</tbody>
</table>

• i.e. Depends on your line of work as an actuary.
• First 2 exams are the same – you don’t have to choose for now.
Why Actuary is Hard to Find

- Unique combination of skills
- Rigid Credential Process

- Probabilistic Modeling
- Statistical Analysis with Data
- Computational Skill (Excel, R, SAS)
- Business Understanding
- Financial Knowledge
Actuarial Science Program at UA

• BS in Statistics – Actuarial Science Track

• Try to pass 2 Exams before the graduation

• Try to get an (actuarial) internship before you graduate

• Great Job Placement Rates (actuarial and non-actuarial)

Actuarial Resource Page
https://www.uakron.edu/statistics/actuarial-science/
Statistics – Actuarial Science Track

- Knowledge of Stats are essential to be a good Actuary
- Gives you more career options

**Take as many Stats courses as you can!**

- Take business elective (Risk Management) early
- Join Gamma Iota Sigma (Student organization)
Stats - AS degree Course Flow

Freshman / Sophomore

3450:221 Calc I
3450:222 Calc II
3460:209 Comp. Sci. I (or Prgmg for Data Sci)
3250:244 Intro to Econ (Or 201/202) [VEE]
6200:201 Accounting

Summer

Summer

Internship ?
(may be non-Actuarial)

Sophomore/Junior

451 (Fall) Theo Stat I (Ex. P)
452 (Spring) Theo Stat II (VEE)
457 (Spring even) Time Series (Ex. SRM)

4xx Stats Elective (Decision Tree, Machine Learning, etc) (Ex. SRM)

Senior

472 (Spring Odd ) Actuarial Models (Ex. STAM)

495 Statistical Consulting (2 semesters) 2cr + 1cr

Take and pass Exam FM

(Fall) Apply for Internship

477 (Spring even) Time Series (Ex. SRM)

Take and pass Exam P

Stats Core requirement

Graduation !!
How to Find Internship

• Best to apply individually (Search on Google, Indeed, etc.)

• Summer actuarial internships are posted Aug-Sep of previous year.

• Some company requires 1 exam passed at the time of application.
VEE requirements

• SOA and CAS requires that you take VEE courses while in college (If not, you have to take online modules)

• Completing Stats-AS degree automatically fulfills all VEE requirements.
  • VEE Math Stats - (452)
  • VEE Ecn - (3250:244 Intro Econ) or (201 and 202)
  • VEE Accounting and Finance – (6200:201 and 6400:301).
UA Alumni works at places like:

**As an Actuary:**
- Progressive
- National Interstate
- Westfield
- Western and Southern
- USI consulting
- Aon
- Erie Insurance
- Auto-owners Ins.
- Transamerica

**As a Predictive Analyst:**
- Progressive
- National Interstate
- Key Bank
- Huntington
- Chase
- Charles Schwab
Contact Us

Department of Statistics
Dr. Nao Mimoto
Office: CAS 413
nmimoto@uakron.edu

https://nmimoto.github.io
https://www.uakron.edu/statistics/actuarial-science/