FIRST-YEAR WORKSHOP

Bruin Actuarial Society
AGENDA

1. Introduction to the Actuarial Career
2. What to Study
3. Exams
4. Skills
5. Recruitment
INTRODUCTION TO THE ACTUARIAL CAREER
An actuary performs **risk analytics** in:

- **Insurance**
  - How much should an insurance company charge for car insurance?
  - How much insurance should banks buy to manage financial risk?
- **Retirement**
  - How much should a company invest to pay for employees’ pensions?
- **Other Areas**
  - What is the cost of an oil spill?

Life is full of uncertainty and risk. So actuaries help answer these questions.
<table>
<thead>
<tr>
<th>Industries</th>
<th>Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property and Casualty</td>
<td>Liberty Mutual, Farmers, Allstate, CSAA</td>
</tr>
<tr>
<td>Health and Benefits</td>
<td>UnitedHealth Group, Aetna, Anthem</td>
</tr>
<tr>
<td>Life</td>
<td>Pacific Life, AIG, New York Life</td>
</tr>
<tr>
<td>Retirement</td>
<td>Aon, Fidelity, Mercer</td>
</tr>
<tr>
<td>Reinsurance</td>
<td>Gen Re, Munich Re, Swiss Re</td>
</tr>
<tr>
<td>Consulting</td>
<td>Willis Towers Watson, Oliver Wyman, Milliman</td>
</tr>
</tbody>
</table>
WHAT TO STUDY
THE MAJOR

- Financial Actuarial Mathematics
  - **Prereqs**: Math 31A to 33B; Math 11N, 42, 61, or 70; Mgmt 1A; Econ 1, 2, 11; PIC 10A, 16
  - **Major (12 courses)**: More Math

- During your first year,
  - Take Math every quarter
  - Start Econ/PIC/Mgmt requirements
  - Start GE courses
    - But don’t finish all of them early or you will only be taking math by senior year
• Actuaries come from all kinds of majors and minors
• A quantitative background is usually preferred, so many students major in the following:

<table>
<thead>
<tr>
<th>Major</th>
<th>Requirements (excluding prereqs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>12 pure math courses</td>
</tr>
<tr>
<td>Applied Mathematics</td>
<td>12 applied math courses</td>
</tr>
<tr>
<td>Mathematics of Computation</td>
<td>14 math and computer science courses</td>
</tr>
<tr>
<td>Mathematics / Economics</td>
<td>14 math and economics courses</td>
</tr>
<tr>
<td>Data Theory</td>
<td>16 math and statistics courses</td>
</tr>
<tr>
<td>Statistics</td>
<td>13 statistics courses, including a capstone project</td>
</tr>
<tr>
<td>Business Economics</td>
<td>10 economic and management courses</td>
</tr>
</tbody>
</table>
If your major is less quantitative or you just want to study another area relevant to the actuarial career, you might consider the following minors:

<table>
<thead>
<tr>
<th>Minor</th>
<th>Course Requirements (excluding prereqs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialization in Computing (For Math Majors)</td>
<td>7 courses related to programming</td>
</tr>
<tr>
<td>Accounting</td>
<td>7 courses related to financial and managerial accounting, tax policies, etc.</td>
</tr>
<tr>
<td>Statistics</td>
<td>6 courses related to theoretical and applied statistics, R</td>
</tr>
<tr>
<td>Math (For Non-Math Majors)</td>
<td>5 courses that can be any upper division math courses</td>
</tr>
</tbody>
</table>
EXAMS
EXAMS

For Health, Life, & Retirement
Exam P
Exam FM

For Property and Casualty
Exam 1
Exam 2
EXAMS

- Exams are often more important than grades
  - (But don’t ignore your grades)
- Computer-Based Test
  - Register for the exam with the SOA
  - Sign up for a spot at a Prometric Testing Center
  - Exams P and FM are both multiple choice
- You can decide when to take it
  - 1 exam is often required for an internship
  - Good target is to pass an exam by Fall of the year that you are recruiting for a summer internship (sophomore or junior year)
EXAM P/1 – PROBABILITY

- Exam Name: Exam P, Probability
- CBT Dates: Nov. 12-28, 2020
- Paper/Pencil Dates*: None
- Registration Deadline: Oct. 13, 2020
- CBT Dates: Jan. 14-25, 2021
- Paper/Pencil Dates*: Jan. 14, 2021
- Registration Deadline: Dec. 15, 2020
- CBT Dates: Mar. 11-22, 2021
- Paper/Pencil Dates*: None
- Registration Deadline: Feb. 9, 2021
- CBT Dates: May 14-25, 2021
- Paper/Pencil Dates*: May 14, 2021
- Registration Deadline: Apr. 13, 2021
- CBT Dates: July 15-26, 2021
- Paper/Pencil Dates*: None
- Registration Deadline: June 15, 2021
- CBT Dates: Sept. 9-20, 2021
- Paper/Pencil Dates*: Sept. 9, 2021
- Registration Deadline: Aug. 10, 2021

- Corresponds to Math 170E (or Math 170AB)
- Many students self study before taking this exam
EXAM FM/2 – FINANCIAL MATHEMATICS

<table>
<thead>
<tr>
<th>Exam Name</th>
<th>CBT Dates</th>
<th>Paper/Pencil Dates*</th>
<th>Registration Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam FM, Financial Mathematics</td>
<td>Dec. 8-24, 2020</td>
<td>None</td>
<td>Nov. 10, 2020</td>
</tr>
<tr>
<td></td>
<td>Apr. 8-19, 2021</td>
<td>None</td>
<td>Mar. 9, 2021</td>
</tr>
<tr>
<td></td>
<td>June 10-21, 2021</td>
<td>June 10, 2021</td>
<td>May 11, 2021</td>
</tr>
<tr>
<td></td>
<td>Aug. 13-24, 2021</td>
<td>None</td>
<td>July 13, 2021</td>
</tr>
</tbody>
</table>

- Corresponds to Math 177
- Can also be taken as first exam
STUDYING FOR EXAMS

• Official recommended study time: 100 hours per exam hour
  • i.e. 3-hour test = 300 hours of studying
• Some study resources:
  • Paper Manual: ACTEX, ASM
  • Online Seminars: CoachingActuaries, TheInfiniteActuary
  • Free Resources: Dr. Finan’s study manual for P/FM, old manual from Boelter Library
    • Warning: May be outdated as exams have changed in recent years

Note: We are in the process of building a new tab on our website with reviews of study resources to make it easier to choose the right resource for you.
SKILLS
SKILLS

Math Skills
- Quantitative major/minor
- 3.0 GPA or above (3.5 to be competitive)
- 1 Exam Passed

Computer Skills
- Object-Oriented Languages
- SQL (Database manipulation language)
- Excel: PivotTables, Formulas, Macros

Professional Skills
- Resume
- Interview skills
  - Prepare answers to common questions
- Communication skills
YOUR BEST FRIEND – BAS!!

BAS will help you gain the skills you need to be successful.

<table>
<thead>
<tr>
<th>Mentorship Program</th>
<th>Ask your mentor if you have any questions or concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Workshops</td>
<td>Learn how to use Excel, R, and VBA</td>
</tr>
<tr>
<td>Professional Development Workshops</td>
<td>Learn about career paths, exams, and more (We already held our resume and interviewing workshops, but you can find the slides on our website: <a href="http://www.math.ucla.edu/~actuary/events.html">www.math.ucla.edu/~actuary/events.html</a>)</td>
</tr>
<tr>
<td>Case Competition</td>
<td>Build your technical and communication skills and gain industry knowledge by tackling an actuarial problem</td>
</tr>
<tr>
<td>Our Handbook</td>
<td>Look on our website for a detailed guide on writing a resume, interviewing, taking actuarial exams, creating a 4-year plan, and more</td>
</tr>
</tbody>
</table>
First Year
- GPA
- Programming
- Resume & LinkedIn
- Network
- Communication skills
- CASE COMP

Second Year
- Attend Career Fair
- Pass exam(s)
- Case competition
- Finish up pre-major courses
- Work on interviewing skills

Third Year
- Attend Career Fair
- Apply for internship
- Interview
- Pass exam(s)

Fourth Year
- Attend Career Fair
- Pass exam(s)
- Case competition
- Finish up pre-major courses
- Work on interviewing skills
RECRUITMENT
GENERAL RESUME TIPS

• Be concise
• Make sure each bullet point answers:
  • What?
  • How?
  • So what? (e.g. Positive effect on company)
• Use past tense
• Make it look nice!!
• It is okay to include high school experience for now (if you’re a freshman)
• Review Resume Workshop/Handbook for more detailed tips
NETWORKING TIPS

• Prepare a short self-introduction (60 seconds max)
  • Name, Year, Major(s), Minor(s)
  • Relevant past experiences
  • Career specific experiences

• Network
  • Meet representatives! They are actuaries and recruiters at the same time
  • Take one: Ask for a business card (or email address if virtual)
  • Give one: Ask to present your resume
CAREER CENTER

• When school is in-person, this is where on-campus interviews take place
  • Located on third floor of the Strathmore Building at Strathmore and Westwood Plaza
  • Come in early to sign in
• Virtual Services
  • Events and workshops
  • Career advising
- LinkedIn for students
- Companies will post job openings here
• Social media for working professionals
• Build your profile
  • Current and former jobs
  • Skills and endorsements
  • Test scores and courses completed
  • Projects (e.g. Case Competition)
• Connect with friends and colleagues
  • Classmates
  • BAS members
  • Firm representatives you talked to