Career Tips to Ensure Success

EXAMS | EDUCATION | EXPERIENCE | COMPUTER SKILLS
NETWORKING | ORGANIZATIONS | RESUME | INTERVIEWING

A Special Thank You to

CA Actuarial Student Summit
ABOUT SALLY

Sally Ezra and Claude Penland, ACAS, founded Ezra Penland with the goal of serving the Actuarial and related modeling fields at all levels. Ezra Penland has deep experience within the related predictive modeling and catastrophe risk modeling fields as well, and the firm is excited to be at the forefront of the insurance analytics field.

This is why I love working with actuaries!
POINTS OF DISCUSSION

• The Path to Starting Your Actuarial Career
  • Exams
  • Education
  • Experience
  • Computer Skills
  • Networking
  • Organizations
    • LinkedIn Groups
  • Resume
    • Email Signature
  • Interviewing
  • Online Resources
EXAMS

• What are the different exams?
  P/1 – Probability
  FM/2 – Financial Mathematics
  IFM/3F – Investment and Financial Markets

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

CAS
  https://www.casact.org/admissions/process/

• What order do I need to take the exams?
• How many exams do I need before I can get a job?
• How many is too many?
Associate of the SOA (ASA)

ASA Pathway

<table>
<thead>
<tr>
<th>INTRODUCTORY I</th>
<th>INTRODUCTORY II</th>
<th>ACTUARIAL</th>
<th>ADVANCED</th>
<th>PROFESSIONALISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEE ECONOMICS</td>
<td>EXAM INVESTMENT AND FINANCIAL MARKETS</td>
<td>EXAM LONG-TERM ACTUARIAL MATHEMATICS</td>
<td>e-LEARNING FUNDAMENTALS OF ACTUARIAL PRACTICE</td>
<td>SEMINAR ASSOCIATESHIP PROFESSIONALISM COURSE</td>
</tr>
<tr>
<td>VEE ACCOUNTING AND FINANCE</td>
<td>EXAM SHORT-TERM ACTUARIAL MATHEMATICS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXAM FINANCIAL MATHEMATICS</td>
<td>EXAM STATISTICS FOR RISK MODELING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXAM PROBABILITY</td>
<td>VEE MATHEMATICAL STATISTICS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PROJECT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PREDICTIVE ANALYTICS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An FSA is a fully qualified actuary with specialization in one area.
Six Specialty Tracks to FSA

- Corporate Finance and Enterprise Risk Management
- General Insurance
- Group and Health
- Individual Life and Annuities
- Retirement Benefits
- Quantitative Finance and Investment
Chartered Enterprise Risk Analyst (CERA)

CERA Pathway

- Equivalent to ASA in effort
- A special combination of exams and modules with an ERM focus
THE CAS INSTITUTE

• Certified Specialist in Predictive Analytics (CSPA)
• Catastrophe Risk Management
  • Certified Specialist in Catastrophe Risk (CSCR)
    • Four exams
      • Property Insurance Fundamentals
      • Catastrophe Risk Insurance Fundamentals
      • Introduction to Catastrophe Modeling
      • Introduction to Catastrophe Risk Management
  • Certified Catastrophe Risk Management Professional (CCRMP)
    • The four exams listed above
    • Advance use of Models in Catastrophe Management
• https://thecasinstitute.org/
EDUCATION

• Desirable candidates possess at least a bachelor's degree in a quantitative area of study:
  Actuarial Science
  Computer Science
  Economics
  Engineering
  Finance
  Management Information Systems (MIS)
  Mathematics
  Physics
  Statistics
  Music

• Actuaries come from all walks of life
EXPERIENCE

• Obtain at least one actuarial summer internship
• Ideally, you should strive for two internships
• Internships are a great opportunity to "try on" a discipline
  • Health
  • P&C
  • Life
  • Pension
• Internships are a great way to determine what kind of work environment you like
  • Consulting
  • Insurance Company
    • Larger or smaller company
• View the differences between consulting and insurance here: https://www.soa.org/future-actuaries/cand-conn-features/2015-insiders-insights-consulting-versus-insurance/
Technology plays an important role in the actuarial profession

Must-Have Computer Skill:

- Excel
  - Use of pivot tables daily, lookups, and complex formulas are crucial
  - Know how to organize the field and summarize data
  - Key functions: VLOOKUP, INDEX, MATCH, TEXT, IF, AND, OR, SUMIF, LEFT, and RIGHT

Should-Have Computer Skills:

- Visual Basic (VBA)
- SQL (Structured Query Language)
- Python or C Python (open-source version)
- R (open-source) or SAS
ADDITIONAL SKILLS

• Predictive Analytics
  • Used to be seen as a competitive advantage for insurers, now it’s absolutely necessary

• Robotics/IA
  • Companies are exploring opportunities for automation in key actuarial processes and tasks, including:

<table>
<thead>
<tr>
<th>Property and casualty, accident and health</th>
<th>Life and annuity</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Data preparation—extraction, reconciliation, and formatting</td>
<td>• Modeling and forecasting—model runs and updates</td>
</tr>
<tr>
<td>• Reserving analysis, including rules-based selection</td>
<td>• Valuation and reporting</td>
</tr>
<tr>
<td>• Standard report preparation</td>
<td>• Reinsurance administration and reporting</td>
</tr>
<tr>
<td>• Pricing and rate monitoring</td>
<td>• Experience monitoring</td>
</tr>
<tr>
<td>• Rate filing and rating quotes</td>
<td>• Product development and pricing</td>
</tr>
<tr>
<td>• Experience monitoring and trend analysis</td>
<td>• System conversions</td>
</tr>
<tr>
<td>• Financial planning and analysis support—preparation and calculation of scenarios</td>
<td>• In-force administration—”workarounds” for existing policies</td>
</tr>
<tr>
<td>• Data visualizations</td>
<td></td>
</tr>
</tbody>
</table>

[http://contingencies.org/robots-join-team-automation-transformation-future-actuarial-work/]
NETWORKING

• Talk to everyone about being an Actuary
• The actuarial community is small, use it and treat it well
• Become involved with the Alumni from your Alma Mater
• Attend Meetings of Local Actuarial Clubs
  • Southern California Casualty Actuarial Club
• Attend Career Fairs
• Build Your Online Brand
  • LinkedIn, Twitter, Facebook, Instagram
  • Any email correspondence should have a signature
• Research the company and field and make connections on your findings
TAKE ADVANTAGE OF ACTUARIAL CONNECTION OPPORTUNITIES

• SOA Candidate Connect
  • Newsletter designed for SOA candidates taking exams; updates on initiatives, exam development, and candidate events
• CAS Student Central
  • Chris Gross, Predictive Modeling Software
    • https://www.casstudentcentral.org/new-benefit-for-members-of-cas-student-central-access-to-predictive-modeling-software/
• Stanford free classes
  • https://lagunita.stanford.edu/courses/HumanitiesSciences/StatLearning/Winter2016/about
• Kaggle
  • https://www.soa.org/predictive-analytics/kaggle-program/
• SOA/CAS Seminars – Podcasts, Professional Development Courses
ORGANIZATIONS TO JOIN

• Organization of Latino Actuaries (OLA)
  - http://latinoactuaries.org/

• International Association of Black Actuaries (IABA)
  - https://www.blackactuaries.org/

• Read field related publications
  • Contingencies
    - http://contingencies.org/
  • Actuarial Review
    - https://ar.casact.org/
LINKEDIN GROUPS TO JOIN

- SOA
- CAS
- Ezra Penland
- The Entry Level Actuary
- Reinsurance Actuaries, Cat Modelers and Underwriters
- Life Actuaries and Actuarial Analysts Worldwide
- Casualty/Health/Consulting/Pension Actuaries and Actuarial Analysts Worldwide (separate groups)
- The Catastrophe Risk Modeling Group
- The Insurance Predictive Modeling Group
- Actuaries Networking for Career Opportunities
- Actuary Network – The #1 Group for Actuaries
- Follow Influencers
RESUME

• Contact Information at the top
• Exams Passed
• Your Next Sitting
• Professional Experience
  • Actuarial Internships
• Education, Anticipated Graduation Date, GPA
• Relevant Coursework
• Technical Skills
• Certifications
• Leadership and Activities
• Review formatting – is it consistent and attractive?
JOHN R. SMITH

123 Main Street | New York, NY 10002 | (212) 555-5555 | johnsmith@gmail.com

ACTUARIAL EXAMS
Passed Exam P/1, July 2017
Passed Exam FM/2, February 2018
Passed Exam MFE/3F, July 2018
Sitting for Exam C4, June 2019

PROFESSIONAL EXPERIENCE
Department of Mathematics, NYU – New York, NY
Mentor and Grader, Calculus I/II
• Prepare, distribute, and provide solutions for exam review sessions
• Responsible for scoring and correcting weekly quizzes and bi-weekly exams

Reinsurance Company – Boston, MA
Actuarial Intern
• Developed Excel spreadsheets that eased the pricing of three different lines of business
• Evaluated competitor rate changes for trends in pricing, to compare to company’s method of pricing
• Presented rate change findings as graphical results to company board, consisting of actuaries and non-technical managers

Life Insurance Company – New York, NY
Actuarial Intern
• Assisted in the development of asset and liability models, used to improve current policy guidelines
• Generated user reports and added new assumptions, improving current models
• Ensured accurate input of consumer data using Excel and Access

EDUCATION
New York University – New York, NY
Bachelor of Science, Actuarial Science (GPA: 3.6 / 4.0) Minor: Economics
Awards and Honors: Dean’s List, NYU Scholar Award, Martin Luther King Jr. Scholarship

TECHNICAL SKILLS
Microsoft Office Suite (Excel and Access), VBA, SQL, and SAS

CERTIFICATIONS
Microsoft Certified Systems Engineer (MCSE)

LEADERSHIP & ACTIVITIES
New Actuarial Club, NYU – New York, NY
President (August 2018 – Present), Treasurer (August 2017 – August 2018)
• Lead monthly meetings for Actuarial Club members, meeting topics include exam preparation, internship opportunities, and interview tips, among others
• Act as liaison between Actuarial Club members and hiring managers of local actuarial employers
• Organized efforts to create the Actuarial Club Sponsored Scholarship, awarded to one incoming freshman each fall

Habitat for Humanity – Armonk, NY
Construction Team Volunteer
• Work with local chapter of Habitat for Humanity to build homes for families in need

Expected May 2020
EMAIL SIGNATURE

Sally Ezra
Ezra Penland Actuarial Recruitment
sally@ezrapenland.com
mobile + 1 312-802-9221
direct +1 773-598-4756

www.EzraPenland.com

Sally Ezra LinkedIn

This is a must have for job seekers
INTERVIEW ETIQUETTE

- Greet your interviewers as Ms or Mr
- Make sure your cell phone is turned off!
- Look people in the eye and smile
  - Communication is key in this field
- Firm handshake
- Let the company take the lead during your interview
  - Try not to over talk and let the silences happen
- Sit up straight and lean slightly forward
- Take notes
- Arrive 15 minutes early, but no earlier
- Send a 'Thank You' note after your interview
  - Email is okay, but not voicemail
INTERVIEW QUESTIONS

• What does an actuary do?
• What’s going on in the industry right now?
• What was your favorite and least favorite class in college and why?
• What was the most difficult actuarial concept you have learned? Can you please explain it.
• What do you know about our company?
• Why would you choose P&C over health (or life or pension) insurance or vice versa?
• Describe a time when you have had to work with a particularly large data set.
• Explain a complicated mathematical concept in simple terms as if talking to your grandparents.
• What is your strategy when studying for exams?
• Questions based on technical skills listed on resume
• Based on your previous experiences, what did you learn at a previous job that would help you as an actuary?
• Explain data.
• More Interview Questions can be found on Ezra Penland
  • [https://www.ezrapenland.com/interviewquestions/](https://www.ezrapenland.com/interviewquestions/)
ONLINE RESOURCES

- The Entry-Level Actuary: [https://www.linkedin.com/groups/3701842/](https://www.linkedin.com/groups/3701842/)
- Student Central: [https://www.casstudentcentral.org/](https://www.casstudentcentral.org/)
- SOA Candidate Connect: [https://www.soa.org/future-actuaries/candidate-connect-landing/](https://www.soa.org/future-actuaries/candidate-connect-landing/)
- Scholarships – Actuarial Foundation and local clubs – Ezra Penland offers one twice a year as well!
- Society of Actuaries ([www.soa.org](http://www.soa.org))
- Casualty Actuarial Society ([www.casact.org](http://www.casact.org))
THANK YOU

- Prepared for the California Actuarial Student Summit, University of California – Santa Barbara (May 24, 2019)
- For a digital copy of this presentation, please contact actuaries@EzraPenland.com