

General FAQ

For educators and students



1. What is actuarial science?

What is an actuary?

- i. Actuaries measure and manage risk – anywhere you find risk, you’ll typically find an actuary working to mitigate it. Actuaries are highly sought-after professionals who develop and communicate solutions for complex issues. Actuaries tend to work in fields with a financial focus.
- ii. Actuaries have a deep understanding of **mathematics, statistics, and business management**. They use these skills to assess the likelihood of future events then plan ways to reduce that risk. With this, they help businesses grow and provide value to their customers.

Examples of actuarial work

Area	Application
<i>Banking and Financial Services</i>	help banks and financial services companies with product portfolio, capital management and risk analysis
<i>Consulting</i>	advise clients on actuarial financial risks, usually associated with employee benefits and insurance
<i>Enterprise Risk Management</i>	provide tools, techniques and perspective to manage operational risks at an enterprise or corporate level
<i>Entrepreneurial Actuaries</i>	represents a wide range of opportunities for actuaries who desire to set up and run their own business
<i>Environmental Finance</i>	apply finance techniques and practices to environmental issues
<i>Health and Retirement Financing</i>	offer advice on aspects of social insurance including funding levels and population projections
<i>Investments and Fund Management</i>	focus on asset risks for asset managers but also contribute in areas such as hedging strategy, derivatives structuring and structured finance
<i>Pension</i>	certify the contributions needed to fund a pension plan
<i>Predictive Analytics</i>	use modeling and data analysis techniques on large data sets to discover predictive patterns and relationships for business use
<i>Pricing</i>	determine product features and pricing
<i>Product Line or Segment Risk Management</i>	perform risk management functions for a specific line of business for an insurance company
<i>Reinsurance</i>	perform traditional actuarial duties for a reinsurer that would accept risk from a direct insurance company
<i>Sales and Marketing</i>	help set policies, messages and compensation levels for those directly involved in marketing
<i>Senior Management</i>	provide broad business and management oversight for an organization’s most senior decision makers
<i>Valuation</i>	perform experience studies, cash flow testing and other tasks to set the amount of reserve and capital held by an insurer
<i>Wealth Management and Financial Planning</i>	contribute skills and expertise to wealth management firms and individuals (rather than to insurance companies)



General FAQ

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- b. Why should someone consider being an actuary?
 - i. Actuaries make an exciting impact on the real-world using math and problem-solving skills, The actuarial profession is also consistently ranked by U.S. News and World Report as a top career (#9 in 2024) and being a best-paying job (#25 in 2024). Additionally, many companies will pay for exams and study time along with bonuses and promotions tied to each exam passed on the way to a credential.
- c. Who should consider actuarial science?
 - i. If your student shows interest in math and business, the actuarial profession might be right for them!
- d. What majors should college students look at to become an actuary?
 - i. Since the credentialing process is an exam pathway absent from schooling, the student can study whatever they'd like. It makes sense to study math, finance, business, or actuarial science, but it is not a requirement. Check out the exam pathway (<https://pathways.soa.org/designations/asa>) to see what topics are covered in the SOA's exams to be able to best give advice.
- e. What does the exam pathway look like?
 - i. For a visual of the pathway, please visit <https://pathways.soa.org/designations/asa>

2. How do I get started?

- a. A student has expressed interest in actuarial science – what should I suggest they do next?
 - i. The SOA has a page (<https://www.soa.org/future-actuaries/get-started/>) with a variety of first steps – from determining exam eligibility, signing up for those exams and connecting with local actuaries.
 - ii. The SOA has a free Affiliate Membership (<https://www.soa.org/programs/affiliate/>) program that anyone can sign up for!
 - 1. The Affiliate Membership program includes access to an eLearning library with free courses in programming languages, communication skills, and more; access to MentorLink in which students can set up individual meetings with actuaries; a video library and more.



General FAQ

For educators and students



- b. What is the exam pathway?
- i. Explore our interactive exam pathway here: <https://pathways.soa.org/designations/asa>. This details the required exams for our candidates to complete their Associate of the Society of Actuaries (ASA) credential.
 - ii. For the most up-to-date information on exams, please visit <https://www.soa.org/education/overview/>.
- c. What are the key components of the pathway?
- i. Exams
 1. Most candidates take Probability (P) or Financial Mathematics (FM) to start. These are the basis for the rest of the exams.
 2. Sample exams are online! <https://www.soa.org/education/exam-req/syllabus-study-materials/edu-exam-p-online-sample/>
 - ii. Validation by Education Experience (VEE)
 1. There are three Validation by Educational Experience (VEE) topics to complete on the pathway to an Associate of the Society of Actuaries (ASA) credential or Actuarial Foundations Micro-credential:
 - a. Economics
 - b. Accounting and Finance
 - c. Mathematical Statistics
 2. A student must first pass two exams before applying for VEE credit.
 3. A student may be able to take courses that already exist at the university that could count toward VEE. See <https://www.soa.org/education/exam-req/edu-vee/> “adding course options” on right hand side of the page for details on how to get those reviewed and approved with SOA.
 - iii. eLearning modules
 1. There are currently four eLearning modules for candidates to complete. Topics covered in these modules include emotional intelligence (EQ) and adaptability (AQ), the role of an



General FAQ

For educators and students



actuary, technical skills, and real-world applications of concepts covered in previous exams.

iv. Associateship Professionalism Course (APC)

1. The Associateship Professionalism Course (APC) is the final requirement for the ASA credential and CERA designation. Candidates will examine and discuss case studies based on actual business situations to analyze and recommend solutions that align with the Code of Professional Conduct, Standards of Practice, ethics and legal liability. After completing all other ASA requirements, candidates will participate in an in-person or virtual APC session.

d. A student would like to register for an exam – how should I guide them?

- i. On the SOA's homepage, click the "Education and Exams" Tab (<https://www.soa.org/education/exam-req/registration/edu-registration/>). Click on the exams to get information on each exam, syllabus/study material, exam schedule/fees, and general information.
- ii. The first time you register for an exam, you will need to set up a profile. Most candidates start with exam P or FM since these are the bases for future exams. There are sample exams you can take for these two exams under syllabus/study material on the exam pages. This is a self-study program and candidates' study habits differ.
 1. Requirements: <https://www.soa.org/Education/Exam-Req/edu-asa-req.aspx>
 2. Exam Schedule - <https://www.soa.org/education/exam-req/exam-day-info/exam-schedules/>
 3. Fees: <https://www.soa.org/Education/Exam-Req/Syllabus-Study-Materials/Exam-and-Module-Fees.aspx>
 4. To Register: <https://www.soa.org/Education/Exam-Req/Registration/edu-registration.aspx>
 5. To View Prometric exam centers, please go to www.prometric.com/soa

General FAQ

For educators and students



- e. What educational courses should I advise my students who are interested in actuarial science take?
 - i. If you are in your first year of community college or at the beginning of your second year, consider taking foundational courses in advanced math (through calculus), statistics, finance, insurance, accounting, economics, and business as you can.
 - ii. If you are approaching the end of your second year and are considering continuing your education after graduation or transfer, then consider looking at schools with actuarial programs or course offerings. You can view schools with actuarial programs here: <https://www.soa.org/institutions/> Note: you do NOT need to be an actuarial science major to be an actuary!
 - iii. If you plan to join the workforce immediately after graduation, then consider positions that will enable you to demonstrate analytical, critical thinking, communication, and computational/technical skills. Your future employer may offer education assistance toward continuing studies, which can help you identify schools where you can take courses related to actuarial science.

3. Transferring and Universities and Colleges with Actuarial Programs

- a. Universities and Colleges with Actuarial Programs (UCAP)
 - i. The UCAP list (<https://www.soa.org/institutions/>) includes the universities and colleges that have met eligibility requirements at the following three levels of recognition:
 1. UCAP–Introductory Curriculum (UCAP-IC): Must maintain course coverage for at least two SOA preliminary exams and have approved courses for at least one VEE topic area.
 2. UCAP–Advanced Curriculum (UCAP-AC): Must maintain course coverage for at least four SOA preliminary exams with one of those being Exam LTAM or Exam STAM and approved courses for all Validation by Educational Experience (VEE) topic areas.
 3. Centers of Actuarial Excellence (CAE): CAE have attained the highest level of recognition the SOA offers universities. They must maintain eight specific requirements related to degree, curriculum, graduate count, faculty composition, graduate



General FAQ

For educators and students



quality, appropriate academic integration, connection to industry, and research/scholarship.

- b. How should I advise a student looking to transfer to a four-year institution for actuarial science?
 - i. Begin by looking at the UCAP list for local institutions that are recognized by the SOA as a UCAP institution. Some of these institutions have transfer agreements, which can be used to your students' advantage! If there are no local UCAP institutions that your student is interested in, advise them that attending an institution with either a strong math or business program can also help set them up for success.

4. Miscellaneous

- a. Actuarial internships
 - i. While actuarial internships are not required, some companies use internships as a way to lead to a full-time job offer. They often prove to be a student's "in" to the career. When students are preparing to apply for internships, encourage them to visit your institution's career services center to polish their resume and practice interviewing skills!
 - ii. Applying for Internships
 - 1. Internship recruitment begins early summer in conjunction with some affinity-based organizations' annual conferences that host career fairs, and on campus recruitment begins in September. Sharpen your resume in August in time for those recruitments! There may be on site interviews at career fairs and offers are generally made in November, with some rolling positions in the early spring. Most of these positions are going to students applying in their junior year.
 - 2. Some school year internships, as well as mentoring or job shadowing opportunities, are available so keep an eye out for those chances for younger students. When searching for an internship, taking exams is a good way to show you are committed to the profession and have an aptitude for actuarial science. If you don't land an internship, all is not lost! You can find other entry level positions in insurance or related fields and still work to get your foot in the door.



General FAQ

For educators and students



- iii. Get connected to identity-based affinity organizations and actuarial clubs in local areas to find career fairs, internship and scholarship opportunities, and more:
 - 1. International Association of Black Actuaries (<https://www.blackactuaries.org/>)
 - 2. Organization of Latino Actuaries (<https://www.latinoactuaries.org/>)
 - 3. Sexuality and Gender Alliance of Actuaries (<https://www.sagaactuaries.org/>)
 - 4. South Asian Network of Actuaries (<https://www.sanaactuaries.org/>)
 - 5. Network of Actuarial Women and Allies (<https://www.nawaactuaries.org/>)
 - 6. Abacus Actuaries (<https://www.abacusactuaries.org/>)
 - 7. SOA Explorer to find local actuarial clubs (<https://explorer.soa.org/>)
- b. How do I get connected to actuaries in my area?
 - i. Check out SOA Explorer! (<https://explorer.soa.org/>) Many individual actuaries, companies, and actuarial clubs are listed on SOA Explorer. The free Affiliate Membership program also offers a MentorLink program where students are connected with a mentor who is currently an actuary.
- c. How do I invite an actuary to campus to speak to students?
 - i. Visit <https://wkf.ms/42ylibj> to request an actuary come to your campus!

Question wasn't answered here? Please email candidate@soa.org for more information!

