

Second Major in Actuarial Science (ACS)

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Actuarial Science and Actuaries

- Actuarial Science applies rigorous actuarial models and data science techniques to the analysis and management of various risks in organisations
- By analysing and managing risks, actuaries bring financial security to customers, organizations and the society
- Qualified actuary is a well-respected professional who receives world-wide recognition and rewards.

Actuarial Organizations

- Society of Actuaries (SOA): www.soa.org
 - Largest actuarial organization in the world: ASA and FSA
- Casualty Actuarial Society (CAS): <https://www.casact.org/>
 - Non-life actuarial organization: ACAS and FCAS
- Institute and Faculty of Actuaries (IFoA): www.actuaries.org.uk
 - UK actuarial organization: FIA
- Actuaries Institute: www.actuaries.asn.au
 - Australia actuarial organization
- Singapore Actuarial Society: www.actuaries.org.sg
 - Local actuarial organization

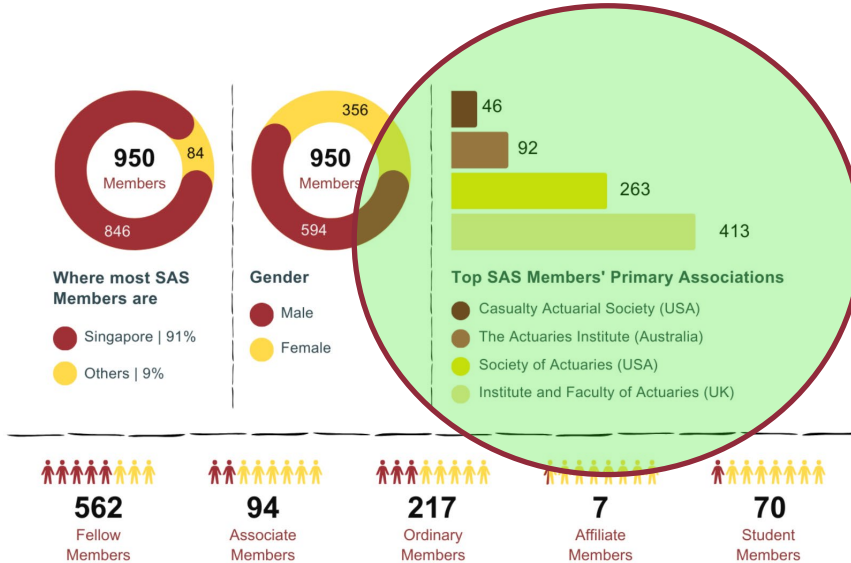
Numbers of FSA and ASA in SOA

Source: SOA

As of December 2022

	Fellows	Associates	Total
United States	13,166	8,216	21,382
Canada	3,582	1,664	5,426
Other	3,273	2,748	6,021
Total	20,021	12,628	32,649

Year	Fellows	Associates	Total
2021	19,428	12,570	31,998
2020	18,872	12,363	31,235
2019	18,553	12,656	31,209
2018	17,853	13,470	31,323
2017	17,310	11,851	29,161
2016	16,754	11,016	27,770
2015	16,222	10,293	26,515
2014	15,729	9,849	25,578
2013	15,071	9,342	24,413



Source: Singapore Actuarial Society

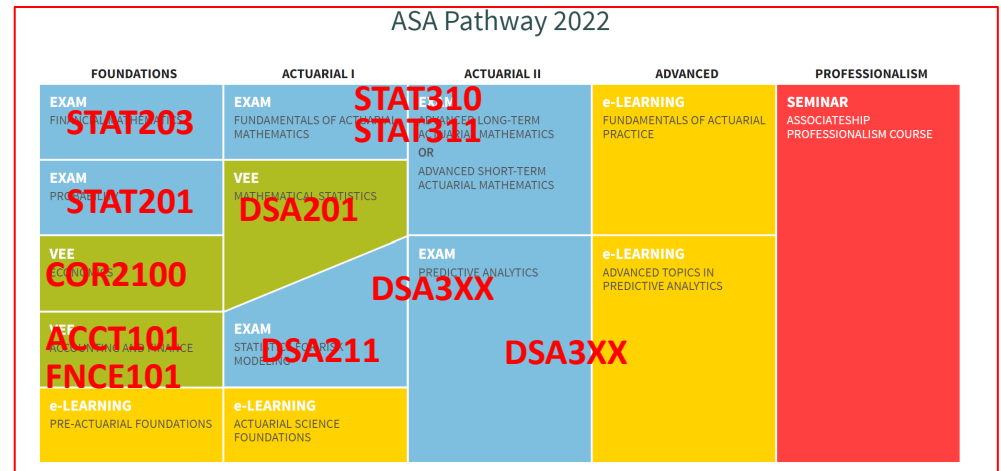
ACS Curriculum (pre-requisite: COR2100 Economics & Society)

1. DSA201 Statistical Inference for Data Science
2. DSA211 Statistical Learning with *R*
3. STAT201 Probability Theory and Applications
4. STAT203 Financial Mathematics
5. STAT311 Risk Theory and Loss Models
6. STAT310 Life Contingent Risks
7. ACCT101/111 Financial Accounting
8. FNCE101 Finance
9. **Any two DSA3XX electives**

Industry Integration (II) Track with additional requirements:

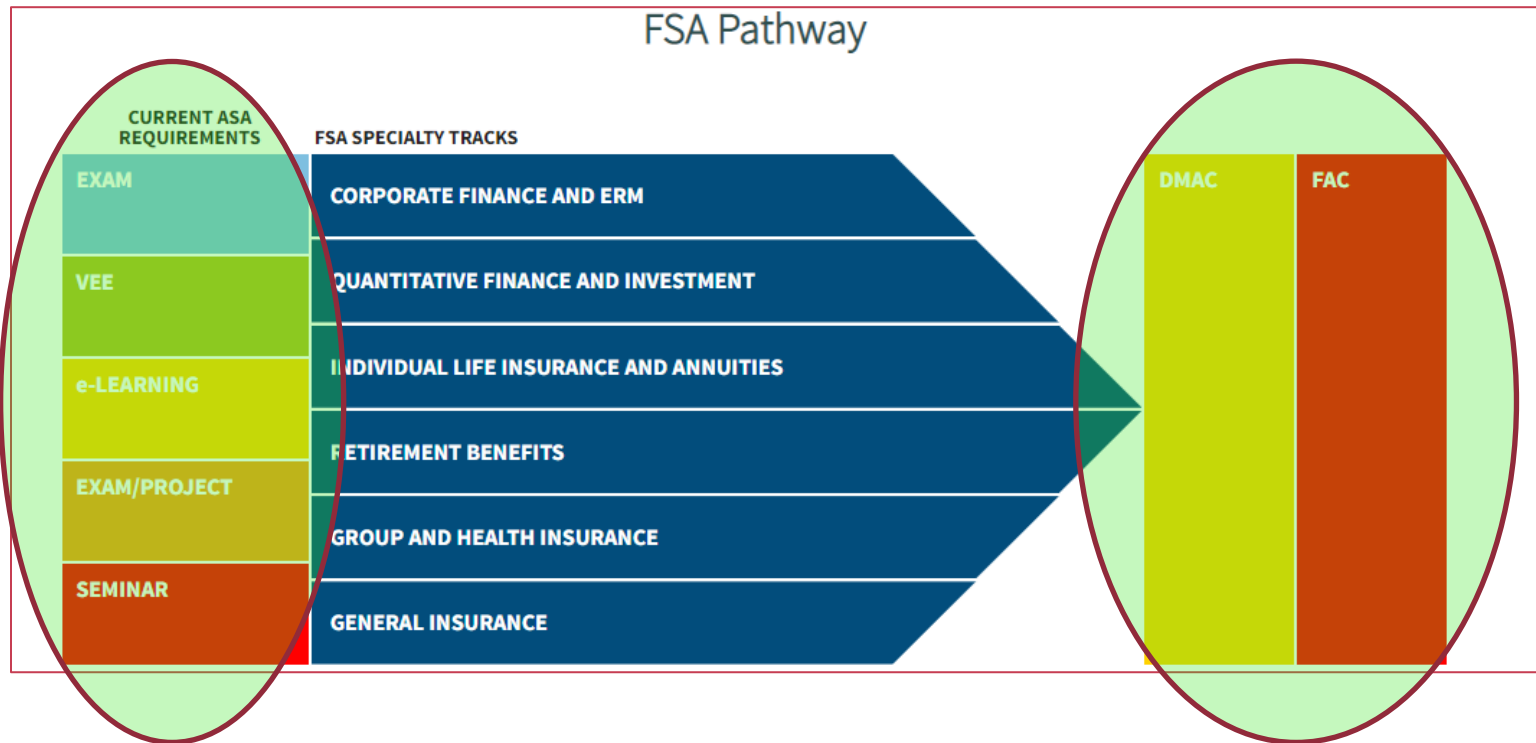
- ACS Work-Study Elective (WSE)
- DSA301 Time Series Data Analysis (one of two DSA3XX)

Students need to sign up ACS WSE module first before they can declare this track.



The Fellow of the Society of Actuaries (FSA)

Source: SOA



Work-Study Elective (WSE)

- 20- to 24-week internship
- From January to June (Term 2) or from July to December (Term 1)
- During regular term time, students work for at least four days each week at the host company and may take courses (max 2 courses) on campus up to one day each week
- WSE is a pass/fail course, and it is equivalent to 2 course units
- 5 Industry Partners: AIA, Partner Reinsurance Asia, HSBC Insurance, FWD, KPMG
- 3+1+2+4 students had chosen WSE since 2023

A new Industry Integration (II) Track is established in the ACS programme for students who are eager to pursue their professional careers in the actuarial field after graduation. The II Track ensures that ACS students in this track have a higher exposure to industry, better connections, and more practical working experience, as compared to other ACS students not in the track.

ACS students in II Track need to fulfil all ten module requirements, including DSA301 Time Series Data Analysis plus one additional Actuarial Science Work-Study Elective (ACS WSE). ACS students can only declare II Track in ACS programme if they successfully sign up for ACS WSE.

24 June 2022



FIS Training Workshops

- Most insurance companies in Singapore use FIS's Insurance Risk Suite, actuarial modelling software, e.g. AIA, HSBC Insurance etc.
- CPF also uses this software
- FIS has been sponsoring software licenses to SMU for training purpose since 2021
- SMU is the only university in Singapore awarded such free licenses
- Hold four 15-hour workshops (training 15 students in 2022 and 16 students in 2023)



Source: FIS

January 2022



June 2022



January 2023



July 2023

ACS Graduates

	2022/2023	2021/2022	2020/2021	2019/2020	2018/2019	2017/2018	2016/2017	2015/2016	2014/2015	2013/2014	Total	Percentage
Summa Cum Laude	6	1	3	1	3	4	1	0	0	6	25	19.1%
Magna Cum Laude	0	3	6	3	3	2	3	0	3	2	25	19.1%
Cum Laude	4	8	3	4	2	2	2	4	5	4	38	29.0%
High Merit	0	2	1	2	3	1	2	3	2	2	18	13.7%
Merit	0	0	0	3	5	5	0	1	0	2	16	12.2%
Other	2	0	1	0	0	2	2	0	1	1	9	6.9%
Total	12	14	14	13	16	16	10	8	11	17	131	100.0%

As of September 2023, 188 students had graduated with second ACS major.

19 of them have been awarded Fellowships (13 FSA, 5 FCAS, 1 FIA)

Years to Take	2	3	4	5	6	7	8	9	10
Number of FSA	1	2	2	3	1	0	0	3	1
Number of FCAS	0	3	0	0	1	1	0	0	0
Number of FIA	0	0	1	0	0	0	0	0	0

12 of them have been awarded Associateships (8 ASA, 3ACAS, and 1AFA)

SOA Exam Fee Reimbursement

Updated in July 2023

Year of Graduation	Number of students benefited	Total Amount Claimed (\$)
2014	4	400
2015	5	750
2016	5	1,450
2017	8	2,350
2018	9	2,500
2019	9	1,900
2020	8	1,100
2021	6	1,350
2022	10	2,250
2023	9	2,900
Total	73	\$16,950

UCAP-AC/CAE Reimbursement of Exam Fees

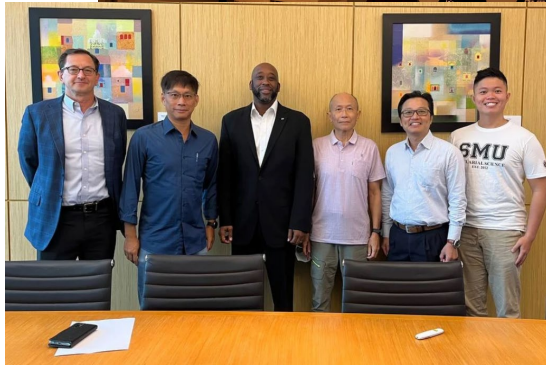
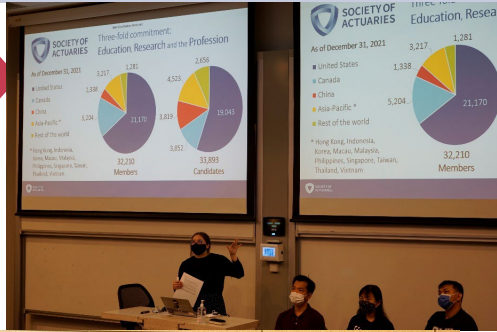
Application Deadline: Application is **due within 90 days of official grade release.**

Each CAE and UCAP-AC university or college may request reimbursement for up to **three (3)** exams passed per academic year (exams taken between July 1-June 30). Students eligible for exam fee reimbursement are those who are enrolled full-time at the university at the time the exam is taken. Only one reimbursement per year for a given student will be provided.

The application form **must be filled out by the UCAP faculty contact**

- Exams must be taken between July 1 – June 30
- Eligible exams include: SRM, FAM, ALTAM, ASTAM, FAM-L, and FAM-S

Reimbursement amounts \$150 (for P and FM) and \$200 (for other exams) in 2023



ACS Information Session on 7 March 2024

18 June 2022



30 September 2022



17 September 2022



5 January 2023



17 May 2023



7 October 2023
Actuarial Science Party



Thank you