

Actuarial Science Joint Honours Plan

2025-2026 calendar

These sheets were created to help you plan your courses, not to provide an official list of your graduation requirements. It is ultimately your responsibility to ensure you meet your graduation requirements which are officially listed in the undergraduate calendar. For example, a mistake on this sheet cannot be used as a reason to graduate without meeting official requirements. See: <https://uwaterloo.ca/academic-calendar/undergraduate-studies/catalog#/programs>

| | Course | Year/ Term | Topic | Pre-reqs | Offering | Comments |
|----|---|---------------|---|---|---------------|---|
| 1 | CS 115/135/136 | 1A | CS Core I | | FWS | |
| 2 | MATH 135/145 | 1A | Algebra | | FWS | |
| 3 | MATH 137/147 | 1A | Calculus I | | FWS | |
| 4 | MTHEL 131 | 1A/B | Intro to Actuarial Practice | | FW | ≥60% required for admission to ACTSC |
| 5 | CS 116/136/146 | 1B | CS Core II | CS Core I | FWS | |
| 6 | MATH 136/146 | 1B | Linear Algebra 1 | M135 | FWS | |
| 7 | MATH 138/148 | 1B | Calculus II | M137 | FWS | * a few other options - see first year advisor if you have issues |
| 8 | AFM 101 | 1 | Introduction to Financial Accounting | | FWS | |
| 9 | MATH 235/245 | 2A | Linear Algebra 2 | M136 | FWS | |
| 10 | MATH 237/247 | 2A | Calculus 3 | M136, ≥ 60% M138 | FWS | |
| 11 | STAT 230/240 | 2A | Probability | M137 >80% or M138 | FWS | |
| 12 | STAT 231/241 | 2B | Statistics | M138, S230 | FWS | |
| 13 | ACTSC 231 | 2A | Introductory Financial Mathematics | M137, level 2A, Coreq S230 | FWS | |
| 14 | ACTSC 232 | 2B | Life Contingencies 1 | >60% in A231, S230, Coreq MTHEL 131 | FWS | |
| 15 | ACTSC 372 | 2/3 | Investment Science and Corporate Finance | A231, M235, M237 | FWS | |
| 16 | ACTSC 331 | 3A | Life Contingencies 2 | ≥60% in A232 | FWS | |
| 17 | ACTSC 363 | 3A | Casualty and Health Insurance Mathematics 1 | Coreq S330 | FWS | |
| 18 | ENGL 378/MTHEL 300 | 3B/4 | Professional Communications in Statistics and Actuarial Science | (A331 or S331), ≥70% in EMLS 101R, 102R, EMLS/ENGL 129R, ENGL 109, SPCOM 100, 223 | FWS | |
| 19 | ACTSC 431 | 4 | Casualty and Health Insurance Mathematics 2 | ≥60% in A363, S330, S331/371 | FWS | |
| 20 | ACTSC 446 | 4 | Mathematics of Financial Markets | A372, (S330 or 334) | FW | |
| 21 | STAT 330 | 3 | Mathematical Statistics | M237, ≥60% in S230, S231 | FWS | |
| 22 | STAT 333 | 3 | Stochastic Processes 1 | ≥60% in S230/240, M237/247 | FWS | |
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| + | 1 Additional 400 level ACTSC course; currently available courses include: | | | | | |
| | ACTSC 423/AFM 423 | 4 | Topics in Financial Econometrics | S331/371 | typically W | |
| | ACTSC 432 | 4 | Credibility and Risk Theory | A363, S330, S333 | S | |
| | ACTSC 445 | 4 | Quantitative Enterprise Risk Management | A372, (S330 and 333 or 334) | FS | |
| | ACTSC 453 | 4 | Basic Pension Mathematics | A331 | W (odd years) | |
| | ACTSC 454 | 4 | Longevity and Mortality using Predictive Analytics | A331, S330 | W | |
| | ACTSC 455 | 4 | Life Contingencies 3 | ≥60% in A331, co-req A446 | W | |
| | ACTSC 489 | 4 | Advanced Topics in Actuarial Science | varies | varies | |
| | ACTSC 447/CS 476 | 4 | Numerical Computation for Financial Modelling | STAT231, CS370 or CS371/AMAT242 | W | |
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| + | Enough additional math to meet the minimum 26 required Math courses | | | | | |
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Updated on:

2025-06-04

Students doing a Joint Actuarial Science must complete 26 math courses.