

Advising sheet for: MAJOR IN ACTUARIAL SCIENCE

Assumption University, Department of Mathematics and Computer Science
Checklist

The major consists of a total of fifteen required courses, which comprise seven specifically required courses in mathematics, six required courses in economics/finance, two in business studies, and a comprehensive mathematics examination.

We recommend to students interested in the actuarial science major: follow your math placement, and take Calculus I as early as possible, because it is part of the major required sequence MAT-117/131, 118/132, 231-232.

Required Courses (15)

Completed	Requirement	Course	Prerequisite	Semester Planned
	Calculus I	*MAT-131H (Fall) or MAT-117	Placement or MAT-114	
	Calculus II	*MAT-132H (Spring) or MAT-118	MAT-131 or MAT-117	
	Calculus III	MAT-231 (Fall)	MAT-118 or MAT-132	
	Multivariable Calculus	MAT-232 (Spring)	MAT-231	
	Discrete Structures	MAT-202 (Fall)	MAT-118 or 132 (completed or concurrent)	
	Probability Theory	MAT-208 (Spring)	MAT-118 or 132	
	Microeconomics	ECO-110		
	Macroeconomics	ECO-111	ECO-110	
	Accounting I	ACC-125		
	Accounting II	ACC-126	ACC-125	
	Actuarial Math	MAT-207 (Fall even)	MAT-202	
	Statistics	ECO-115	BUS-100	
	Econometrics I	ECO-215 (Fall)	ECO-115	
	Financial Management I	FIN-325	ECO 110-111 and ACC-125	
	Investment Theory	FIN-357 (Fall)	ECO 110-111 and ECO-115	
	Senior Math Assessment	Comprehensive Exam, not a course		Final semester

Actuarial Science majors are encouraged – but not required – to take the first Actuarial Exam (Exam P, Probability, sponsored by Society of Actuaries) soon after taking MAT-208. Exam P is a minimum requirement for entry into a summer internship or fulltime employment as an actuary in an insurance company program. Advanced students may also consider taking the second Actuarial Exam (Exam FM, Financial Mathematics) before graduation.

More info about the Actuarial Exam is at the Society of Actuaries web site. <https://www.soa.org>

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A suggested schedule – for students entering in Fall 2021, or any year.

See Assumption's Catalog for additional information, e.g. Core Curriculum requirements.

First Year: Fall 2021	Spring 2022
1. MAT-131 Hon. Calculus I [Fall only] Or MAT-117 Calculus I [any semester] <i>Follow your Math Placement.</i>	1. MAT-132 Hon. Calc. II [Spring only] Or MAT-118 Calculus II [any semester] <i>Finish Calculus I-II soon if possible.</i>
2. ECO-110 Principles of Microeconomics	2. ECO-111 Principles of Macroeconomics
3. ACC-125 Principles of Accounting I	3. ACC-126 Principles of Accounting II
4.	4.
5.	5.

Second Year: Fall 2022	Spring 2023
1. MAT-202 Discrete Structures [Fall]	1. MAT-208 Probability Theory [Spring]
2. MAT-231 Calculus III [Fall]	2. MAT-232 Multivariable Calculus [Spring]
3. MAT-207 Actuarial Math [Fall even] <i>Or take this course in the Third Year.</i>	3. ECO-115 Statistics
4.	4.
5.	5.
6. BUS-100 Intro. to Excel (1 credit)	

Third Year: Fall 2023	Spring 2024
1. ECO-215 Econometrics I [Fall]	1. FIN-325 Financial Management I
2. FIN-357 Investment Theory [Fall]	2.
3.	3.
4.	4.
5.	5.

Fourth Year: Fall 2024	Spring 2025
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
	6. Sr Math Assessment Exam; not a course

Recommended Courses: students in Actuarial Science should also consider these additional courses, e.g. toward the pursuit of a minor in Finance or Economics.

- MAT-203 Linear Algebra, *prerequisite* MAT-202 [Spring]
- MAT-332 Real Analysis, *prerequisite* MAT-232 and MAT-202 [Fall, odd years]
- MAT-355 Differential Equations *pre-/co-requisite* MAT-232 [Spring, odd years]
- CSC-113 Intro. to Computer Science
- CSC-117 Intro. to Programing [Fall]
- CSC-120 Statistics Programming
- CSC-175 Databases and Spreadsheets, *prerequisite* CSC-113 or CSC-117 [Fall]
- CSC-261 Simulation, *prerequisite* CSC-117 [Spring, even years]
- CSC-327 Operations Research, *pre-/co-requisite* CSC-305 [Fall, even years]
- ECO-230 Law and Economics, *prerequisite* ECO-111 [alternating years]
- ECO-310 Microeconomic Theory, *prerequisite* ECO-111 and Calculus I [Fall]
- ECO-311 Macroeconomic Theory, *prerequisite* ECO-111 [Spring]
- ECO-331 Industrial Organization, *prerequisite* ECO-111 [alternating years]
- FIN-330 Financial Modelling, *prerequisite* FIN-325 and ECO-115 [Spring; first offered in 2022]
- FIN-430 Financial Econometrics, *prerequisite* ECO-215 [Spring; first offered in 2023]