PURDUE UNIVERSITY

Actuarial Science
College of Science

2024-2025

Program Progression Guide

Disclaimer: The 2024-2025 Purdue West Lafayette catalog is considered the source for academic and programmatic requirements for students entering programs during the Fall 2024, Spring 2025, and Summer 2025 semesters. The Program Progression Guide assists students in the development of an individualized 8-semester plan. Students are encouraged to use this guide, myPurduePlan* (online degree auditing tool) and the Student Educational Planner (SEP) as they work with their academic advisor towards the completion of their degree requirements.
Notification: Each student is ultimately responsible for knowing, monitoring and completing all degree requirements.

An undergraduate degree in the College of Science requires completion of the following degree requirements.

University Degree Requirements		
Minimum 2.0 Cumulative GPA	Minimum 120 Credits that fulfill degree requirements	32 Residency Credits (30000 and above) at a Purdue University campus

University Core Curriculum**	
• Human Cultures: Behavioral/Social Science • Human Cultures: Humanities • Information Literacy • Oral Communication	• Quantitative Reasoning • Science • Science, Technology & Society Selective • Written Communication

Civic Literacy Proficiency - https://www.purdue.edu/provost/about/provostInitiatives/civics/

Required Major Program Courses
A minimum of 32 semester credits of upper level (30000+) required. Students must earn a 2.5 average GPA among required MA/STAT/MGMT/ECON courses excluding Calculus I, II, III, and STAT 35000**.**

College of Science Core Curriculum		
• Written Communication: 3 credits • Technical Writing & Presentation: 0-3 credits • Computing: 3-4 credits • Cultural Diversity: 0-9 credits	• General Education: 6 credits • Great Issues in Science: 3 credits • Laboratory Science: 6-8 credits • Mathematics: 8-10 credits	• Science, Technology, and Society: 3 credits • Statistics: 3 credits • Team-Building and Collaboration

Degree Electives
Any Purdue or transfer course approved to meet degree requirements in accordance with individual departmental policies. The College of Science has identified courses that are below the disciplinary level of each program and major area of study. While similar, Not Recommended course lists vary between departments.

* This audit is not your academic transcript and it is not official notification of completion of degree or certificate requirements.

** University Core Curriculum Outcomes may be met through completion of the College of Science Core curriculum. Students should consult with their academic advisors and myPurdue Plan for course selections.

2024-2025 Actuarial Science Degree Progression Guide

The Mathematics Department has *suggested* the following degree progression guide for the Actuarial Science Degree. Students will work with their academic advisors to determine their best path to degree completion.

Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4-5	Calculus I Option*	ALEKS 85+ or SATM 670/ACTM 29 requirement	4-5	Calculus II Option	Calculus I, C- or higher
3-4	Science Core Option		3	MA 37300 – meets multidisciplinary requirement *	Calculus I, C- or higher
3-4	Science Core Option		3-4	Programming Option	
2	Free Elective (MA/STAT 17000)	Co-req Calculus I	3-4	Science Core Option	
3	ECON 25100 - Microeconomics		0-2	Free Elective	
1	Free Elective - (MA 10800 or STAT 10100 recommended)				
16-17			**15-18**		

Credit	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
4-5	Calculus III Option	Calculus II, C- or higher	3	MA 35100 Elementary Linear Algebra	Calculus III, C- or higher
3	MGMT 20000 Introductory Accounting		3	MA/STAT 41600 Probability	Calculus III, C- or higher
3	ECON 25200 Macroeconomics		3	MGMT 20100 Management Accounting I	MGMT 20000, C- or higher
3	STAT 35000 or STAT 35500	Calculus II, C- or higher	3	COM 21700 Science Writing & Presentation	
3-4	Science Core Option		2-3	Elective (STAT 25000 Recommended)	
			0-1	Elective	
16-18			**15**		

Credit	Fall 3rd Year	Prerequisite	Credit	Spring 3rd Year	Prerequisite
4	STAT 47201 Fundamental Long Term Actuarial Mathematics – meets Teamwork requirement	MA 37300 and MA/STAT 41600, each C- or better	3	STAT 47902 Fundamental Short Term Actuarial Mathematics	STAT 41700 C- or higher
3	STAT 41700 Statistical Theory	STAT 35000 and MA/STAT 41600, each C- or higher	3	Science Core Option	
3	MGMT 31000	ECON 25100 & MGMT 20000 C- or higher	3	STAT 42000 Introduction to Time Series	STAT 35000 and MA/STAT 41600, each C- or higher
3-4	Science Core Option		3	STAT 47401 Statistics for Risk Modeling I	
3-4	Science Core Option		3	Free elective (MGMT 41100 recommended)	MGMT 31000 C- or higher
15-17			**15**		

Credit	Fall 4th Year	Prerequisite	Credit	Spring 4th Year	Prerequisite
3	STAT 47501 Advanced Long Term Actuarial Mathematics OR free elective	MA 35100, C- or higher/may be concurrent	3	STAT 47301 Introduction to Arbitrage-Free Pricing of Financial Derivatives	
1-5	STAT 49000 Topics in Statistics for Undergraduates – Statistics for Risk Modeling II	DPT Permission	4	MA 36600 Ordinary Differential Equations	
3	Great Issues in Science		3	Science Core Option	
3	Free elective		3	MA49000 Topics in Mathematics for Undergraduates – Advanced Short Term Actuarial Mathematics OR free elective	
6	Free elective		2	Free elective	
15			**15**		

Superscript of *(eg STAT 35000 *) indicates a course a student should earn a minimum of a C in these courses. Courses in ( ) are recommended.

Science Core Curriculum Options

(one course needed for each requirement unless otherwise noted)

Options recommended for first- and second-year students	Options recommended for third- and fourth-year students
Written Communication UC	Technical Writing and Presentation UC (COM 217 recommended)
Computing	Science, Technology, and Society UC
Foreign Language and Culture UC (3 courses needed)	General Education UC (2 courses + MGMT 20000 needed)
Laboratory Science (2 course sequence)	Great Issues

UC Select courses may also satisfy a University Core Curriculum requirement; see the University Core Requirement course list for approved courses. Students must have 32 credits at the 30000 level or above taken at Purdue.