Applied Mathematics
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, and Society • 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 2.0 average in MATH/STAT/CS courses required for major excluding Calculus I, II, and III.

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

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 Applied Mathematics Degree Progression Guide

The Mathematics Department has *suggested* the following degree progression guide for the Applied Mathematics 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		3-4	Programming Option	
3-4	Science Core Option		3-4	Science Core Option	
1	Free Elective (MA 10800 recommended)		3	Free Elective	
4	Free Elective		2	Free Elective	
15-18			**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
3-4	Science Core Option		3	STAT 35000 or STAT 35500	Calculus II, C- or higher
3-4	Science Core Option		3	COM 21700 Science Writing and Presentation	
3	Free Elective (MA 30100 recommended)	Calculus II, C- or higher	3-4	Science Core Option	
2	Free Elective		3	Free Elective	
15-18			**15-16**		

Credit	Fall 3rd Year	Prerequisite	Credit	Spring 3rd Year	Prerequisite
3	CS 31400 Numerical Methods	CS Programming and MA 35100 C or higher	3	MA 35301 Linear Algebra II with Applications	MA 35100 C- or higher
3	MA 34100 or MA 44000	Calculus III, C- or higher	3-4	Free Elective	
3-4	Science Core Option		3	MA 36600 Ordinary Differential Equations	Calculus III; co-req or pre MA 35100 C- or higher
3-4	Science Core Option		3-4	Science Core Option	
3	Free Elective				
15-17			**14-15**		

Credit	Fall 4th Year	Prerequisite	Credit	Spring 4th Year	Prerequisite
3	MA 45300 or MA 45000 Algebra	MA 35100 (grade requirement depends on course)	3	Math/Statistics Elective	Varies by Class
3	MA 42500 Elements of Complex Analysis	Varies by Class	3	MA 30300	MA 35100 C- or higher
3	Math/STAT Option		3	MA 42800 Introduction To Fourier Analysis OR MA34900 Signals and Systems for Mathematicians	Varies by Class
3	Science Core Option		6	Free Elective	
3	Great Issues in Science Option				
15			**15**		

Superscript of * (eg Calculus I Option*) indicates a course a student should earn a minimum of a B- see advisor for further details.

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 Communcation[UC]	Technical Writing and Presentation[UC] (COM 217 recommended)
Computing (CS 17700 or CS 15900)/Teamwork	Science, Technology, and Society[UC]
Foreign Language and Culture[UC] (3 courses needed)	General Education[UC] (3 courses needed)
Laboratory Science (2 course sequence)	Great Issues