Program Progression Guides

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

University Core Curriculum
Course Listing

- Quantitative Reasoning
- Science
- Science, Technology & Society Selective
- Written Communication

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

Required Major Program Courses

Departmental specific requirements: all major required courses, all major electives (selectives), and their pre-requisites, regardless of department, must be completed with a grade of C or better.

College of Science Core Curriculum

- Written Communication – 3-4 credits
- Technical Writing and Presentation – 3-6 credits
- Teaming & Collaboration (NC)
- General Education – Met with degree requirements

- Foreign Language & Culture – 0-9 credits
- Great Issues - 3 credits
- Laboratory Science – 6-8 credits
- Science, Technology & Society – 1-3 credits

- Mathematics - 6-10 credits
- Statistics - 3 credits
- Computing - 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.

2023-24 Artificial Intelligence Degree Progression Guide

The Computer Science Department has suggested the following degree progression guide for the Artificial Intelligence Degree. Students will work with their academic advisors to determine their best path to degree completion. Course pre-requisites are specific to this degree plan.

Credit	Fall 1st Year	Prerequisite	Credit	Spring 2nd Year	Prerequisite
3	CS 17600^{CC} ***	Co-req CS 19300	4	CS 18000 ***	CALC I
3	PSY 12000 ^{CC} ***		3	CS 18200 ***	CS 18000 & CALC 1
4-5	MA 16100^{CC} or 16500^{CC} (CALC I) ***	ALEKS 85+	1	Recommended: CS 19300*	
3-4	Science Core Option		4-5	MA 16200 or MA 16600 (CALC II) ***	CALC I
1	Free Elective		3	PSY 20000 or PSY 22200 ***	PSY 12000
1					
15-17			15-16		

Credit	Fall 2nd Year	Prerequisite	Credit	Spring 2nd Year	Prerequisite
3	CS 24300***	Calc I, CS 18000 & CS 18200	3	CS 25300 ***	CS 17600, CS 18200 & CS 24300
4-5	MA 26100 or MA 27101 (CALC III) ***	CALC II	3	MA 26500 or MA 35100***	CALC II & (co-req CALC III)
3	STAT 35000 or STAT 51100 ***	CALC II	3	MA 41600 or STAT 41600***	
3	(PHIL 20700 or PHIL 20800) *** or (PHIL 22100 or PHIL 32200) ***		3	(PHIL 20700 or PHIL 20800) *** or (PHIL 22100 or PHIL 32200) ***	
3-4	Science Core Option		3-4	Science Core Option	
16-18			15-16		

Credit	Fall 3rd Year	Prerequisite	Credit	Spring 3rd Year	Prerequisite
3	CS 37300 ***	CS 18200 & CS 25100 & STAT 3500 or STAT 51100	3	CS 38100***	CS 25100 & MA 26100
3	CS Selective I ***	Varies	3-4	Science Core Option	
3	Philosophy Selective***	CALC II	3-4	Science Core Option	
3-4	Science Core Option	CALC II	3	Free Elective	
3-4	Science Core Option		3	Free Elective	
15-17			15-17		

Credit	Fall 4th Year	Prerequisite	Credit	Spring 4th Year	Prerequisite
3	CS 47100 ***	CS 25100	3	CS Selective II ***	Varies
3	CS Selective I ***	Varies	3-4	Science Core Option	
3-4	Science Core Option		3-4	Science Core Option	
3-4	Science Core Option		3	Free Elective	
3	Free Elective		3	Free Elective	
15-17			15-17		

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 (CS 18000)	General Education^{UC} (3 courses needed)
Foreign Language and Culture^{UC} (3 courses needed)	Lab Science^{UC} (2 courses needed)
Science, Technology & Society Selective^{UC}	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.

* Enrollment in CS 19300: Tools is recommended with CS 18000. This is not a degree requirement.

Superscript of CC (eg CS 18000 ^{CC}) indicates a Critical Course

*** For this degree, all major required courses, all major electives (selectives), and their pre-requisites, regardless of department, must be completed with a grade of C or better

(effective Fall 2023)

2024-25 Artificial Intelligence Major Science Courses

Credits	Course Number	Course Description
3	CS 17600	Data Engineering in Python
4	CS 18000	Problem Solving and object-Oriented Programming
3	CS 18200	Foundations of Computer Science
3	CS 24300	Artificial Intelligence Basics
3	CS 25300	Data Structures and Algorithms For DS/AI
3	CS 37300	Data Mining And Machine Learning
3	CS 38100	Introduction To The Analysis Of Algorithms
3	CS 47100	Introduction to Artificial Intelligence
4	MA 26100	Multivariate Calculus or MA 27101 (5 cr)
3	MA 26500	Linear Algebra or MA 35100
3	PSY 12000	Elementary Psychology
3	MA 41600 or STAT 41600	Probability
3	PHIL 20700 or PHIL 20800	Ethics For Technology, Engineering, And Design or Ethics Of Data Science
3	PSY 20000 or PSY 22200	Introduction To Cognitive Psychology or Introduction To Behavioral Neuroscience
3	PHIL 22100 or PHIL 32200	Introduction To Philosophy Of Science or Philosophy Of Technology
3	STAT 35000 or STAT 51100	Introduction To Statistics or Statistical Methods

2024-25 Artificial Intelligence Computer Science Selective I Course Options (Choose 2)

Credits	Course Number	Course Description
3	CS 43900	Introduction To Data Visualization
3	CS 44000	Large Scale Data Analytics
3	CS 47300	Web Information Search & Management
3	CS 47500	Human-Computer Interaction
3	CS 57700	Natural Language Processing

2024-25 Artificial Intelligence Computer Science Selective II Course Options (Choose 1)

Credits	Course Number	Course Description
3	CS 34800	Information Systems
3	CS 44800	Introduction To Relational Database Systems
3	CS 48300	Introduction To The Theory Of Computation
3	CS 52300	Social, Economic, And Legal Aspects Of Security
3	CS 52900	Security Analytics

2024-25 Artificial Intelligence Philosophy Selective Course Options (Choose 1)

Credits	Course Number	Course Description
3	PHIL 30300	History of Modern Philosophy
3	PHIL 43200	Theory of Knowledge

| 3 | PHIL 43500 | Philosophy of the Mind |