ARTIFICIAL INTELLIGENCE, BS

Campus: NYC, Westchester

Major Completion Summary

Requirement	Credits
University Core Requirements	44-55
Major Requirements	52
Open Electives	1-13
Total Credits	120

University Core Requirements (44-55 credits)

See complete University Core (https://catalog.pace.edu/undergraduate/university-core-curriculum/) requirements.
*Students pursuing a BS in Artificial Intelligence are required to complete CS 121 Introduction to Computer Science and MAT 131 Calculus I from the Foundation Requirements.

Code	Title	Credits
Foundation Requirements		
CS 121	Introduction to Computer Science	4
MAT 131	Calculus I	4

Major Requirements (52 credits)

Code	Title	Credits
CS 113	Mathematical Structures for Computer Science	4
CS 121	Introduction to Computer Science	4
CS 122	Object-Oriented Programming	4
CS 241	Data Structures and Algorithms	4
CS 242	Algorithms and Computing Theory	4
CS 312	Research Methods and Ethics in Computing	3
CS 326	Introduction to Computer Vision Pattern Recognition	4
CS 327	Introduction to Neural Networks	4
CS 377	Mathematical Foundations of Machine Learning	4
CS 385	Artificial Intelligence I	4
CS 387	Database Design	4
CS 495	AI Capstone	4
Computing Electives - Choose 2 from:		
CS 255	Game Development Patterns and Algorithms (CS Elective)	4
or CS 325	Introduction to Data Mining	
or CS 357	Augmented Reality (AR), Virtual Realtiy (VR), and the Metaverse	
or CS 395	Data Science with Python and R	
or CS 472	Introduction to Deep Learning	
Additional Math Requirements		
MAT 234	Introduction to Probability and Statistical Analysis	4
MAT 238	Linear Algebra	4
Total Credits		52

Open Electives (1-13 Credits)

Code	Title	Credits
Select 1-13 credits		1-13

Major Map represents the standard course sequence for students pursuing this degree. Slight variations in the sequence may occur due to prerequisites, placement exam results, and AP/transfer credits.

Course	Title	Credits
First Year		
Fall		
UNV 101	First-Year Seminar: Introduction to University Community	1
CS 121	Introduction to Computer Science	4
CS 113	Mathematical Structures for Computer Science	4
ENG 110	Composition	3
General Core		3
	Credits	**15**
Spring		
CS 122	Object-Oriented Programming	4
ENG 120	Critical Writing	4
MAT 131	Calculus I	4
Learning Community		6
	Credits	**18**
Second Year		
Fall		
CS 241	Data Structures and Algorithms	4
CS 312	Research Methods and Ethics in Computing	3
MAT 238	Linear Algebra	4
Language I		3
	Credits	**14**
Spring		
CS 242	Algorithms and Computing Theory	4
CS 385	Artificial Intelligence I	4
MAT 234	Introduction to Probability and Statistical Analysis	4
Language II		3
	Credits	**15**
Third Year		
Fall		
CS 327	Introduction to Neural Networks	4
CS 377	Mathematical Foundations of Machine Learning	4
MAT 234	Introduction to Probability and Statistical Analysis	4
ENG 201	Writing in the Disciplines	3
	Credits	**15**
Spring		
CS 326	Introduction to Computer Vision Pattern Recognition	4
CS 387	Database Design	4
COM 200	Public Speaking	3
Lab Science		4
	Credits	**15**
Fourth Year		
Fall		
CS Elective		4
General Core (2 courses)		6
Open Elective		3
Civic Engagement		3
	Credits	**16**
Spring		
CS 495	AI Capstone	4
CS Elective		4

Open Elective		4
	Credits	**12**
	Total Credits	**120**