



Sample 4-Year Plan: Artificial Intelligence (BS) Major

This is only one possible path through the AI major. Your path to graduation may vary based on your mathematics placement level, transfer or exam credit, or other factors.

Year 1

Fall Semester – 15 credits	Spring Semester – 15 credits
ENGLISH 101, Intro to College Reading and Writing	ENGLISH 102, College Reading, Writing, and Research
CORE 120, Historical Perspectives or CORE 140, Global Perspectives	CORE 130, Individual and Society
COMPSCI 182, Generative AI Applications	COMPSCI 170, Intro to Python Programming (NSW-Q) or ITSCM 180, Intro to Computing for Business Apps
MATH 142, College Algebra (MQR)	MATH 151, Trigonometry (NSW-Q)
PEGNRL 192, Personal Health and Wellness (NSW)	PHILSPHY 303, Ethics of Artificial Intelligence (HA-H)
INTRAUNV 104, New Student Seminar	

Year 2

Fall Semester – 14 credits	Spring Semester – 16 credits
COMPSCI 215, Discrete Structures	CORE 110, World of the Arts
COMPSCI 218, Intermediate Programming in Python	COMPSCI 223, Data Structures
MATH 253, Calculus and Analytic Geometry I	MATH 254, Calculus and Analytic Geometry II
PSYCH 211, Introductory Psychology (SBS-S)	PSYCH 351, Cognitive Psychology or PSYCH 303, Learning and Conditioning
	STAT 342, Applied Statistics

Year 3

Fall Semester – 16 credits	Spring Semester – 15 credits
MATH 255, Calculus and Analytic Geometry III	PWP 332, Writing for the Web or PWP 372, Technical and Professional Writing or ENGLISH 370, Advanced Composition
MATH 355, Matrices and Linear Algebra	Diversity course for BS degree
COMPSCI 332, Introduction to Artificial Intelligence	COMPSCI 366, Database Management Systems
COMPSCI 364, Cloud Software Development	COMPSCI 432, Introduction to Machine Learning
COMM 110, Introduction to Public Speaking	COMPSCI 437, Natural Language Processing and LLM

Year 4

Fall Semester – 16 credits	Spring Semester – 13 credits
CORE 390, World of Ideas	COMPSCI 433, Theory of Algorithms or COMPSCI 434, Theory of Computation
Lab science course for BS degree (NSWL)	Lab science course for BS degree
COMPSCI 468, Introduction to Deep Learning	COMPSCI 469, Machine Learning Operations
AI major technical elective	AI major technical elective
AI major application elective	

Course Requirements: Artificial Intelligence (BS)

In addition to these courses, students must satisfy Common General Education Requirements and Bachelor of Science degree requirements for the College of Letters and Sciences.

Computer Science Core: Complete all of these courses.

- COMPSCI 170, Introduction to Python Programming, 3 credits (NSW-Q) or ITSCM 180, Introduction to Computing for Business Applications, 3 credits
- COMPSCI 218, Intermediate Programming in Python, 3 credits
- COMPSCI 223, Data Structures, 3 credits
- COMPSCI 364, Cloud Software Development, 3 credits
- COMPSCI 366, Database Management Systems, 3 credits
- COMPSCI 433, Theory of Algorithms, 3 credits or COMPSCI 434, Theory of Computation, 3 credits

Artificial Intelligence Core: Complete all of these courses.

- COMPSCI 182, Generative AI Applications, 3 credits (NSW-Q)*
- COMPSCI 332, Introduction to Artificial Intelligence, 3 credits
- COMPSCI 432, Introduction to Machine Learning, 3 credits
- COMPSCI 437, Natural Language Processing and Large Language Modeling, 3 credits
- COMPSCI 468, Introduction to Deep Learning, 3 credits
- COMPSCI 469, Machine Learning Operations, 3 credits
- PHILSPHY 303, Ethics of Artificial Intelligence, 3 credits (HA-H)*
- PSYCH 351, Cognitive Psychology, 3 credits or PSYCH 303, Learning and Conditioning, 3 credits

AI Technical Electives: Select 6 total credits from this list.

- COMPSCI 446, Distributed Machine Learning, 3 credits
- COMPSCI 454, Machine Learning for Cybersecurity, 3 credits
- COMPSCI 467, Reinforcement Learning, 3 credits
- COMPSCI 493, Internship in Computer Science, 1 to 12 credits**
- COMPSCI 736, Image Processing and Computer Vision, 3 credits***
- COMPSCI 767, Big Data and Data Mining, 3 credits***
- ITSCM 414, Text Mining & Generative AI, 3 credits

AI Application Elective: Select 3 total credits (1 course) from this list.

- COMPSCI 312 or BIOLOGY 312, Intermediate Data Science, 3 credits
- COMPSCI 448 or BIOLOGY 448, Bioinformatics, 3 credits
- COMPSCI 476, Software Engineering, 3 credits
- COMPSCI 493, Internship in Computer Science, 1 to 12 credits

- ECON 350, Big Data Methods for Business, 3 credits
- ENGLISH 281, Introduction to Language Study, 3 credits
or PWP 310, The Grammar of Standard Written English, 3 credits
- ITSCM 382, Data Visualization and Storytelling in Business, 3 credits
- ITSCM 385, Agile Project Management, 3 credits
- STAT 423, Experimental Design and Analysis of Variance, 3 credits

Unique Requirements: Complete all of these courses. These courses may also be used to count toward a minor or a second major.

- MATH 253, Calculus and Analytic Geometry I, 5 credits
- MATH 254, Calculus and Analytic Geometry II, 4 credits
- MATH 255, Calculus and Analytic Geometry III, 4 credits
- MATH 280, Discrete Mathematics, 3 credits
or COMPSCI 215, Discrete Structures, 3 credits
- PSYCH 211, Introductory Psychology (SBS-S), 3 credits
- PWP 332, Writing for the Web, 3 credits
or PWP 372, Technical and Professional Writing, 3 credits
or ENGLISH 370, Advanced Composition, 3 credits
- STAT 342, Applied Statistics, 3 credits

* General Education designation will be added to this course beginning in Spring 2027.

** COMPSCI 493, Internship in Computer Science, is repeatable for up to 12 credits toward the degree. COMPSCI 493 credit may be used in the Artificial Intelligence major only if the internship or employment is related to artificial intelligence or software development. Department approval is required.

*** Graduate courses (numbered 500 or above) may have additional requirements prior to enrollment by undergraduate students. See the [Seniors Taking Graduate Courses Policy](#) for further information.

An approved minor is not required for this major. However, the MATH and STAT courses in this major's unique requirements may be used to complete a minor in Mathematics. Consult your advisor or the Department of Mathematics for more information.

As a general rule, UW-Whitewater does not allow students to use credit for a given course to satisfy requirements for more than one major or minor. Courses listed under Unique Requirements, below, are an exception to this rule: any course that satisfies a Unique Requirement may also satisfy a requirement for another major or minor. Also, any course may satisfy both a General Education requirement and a major or minor requirement.