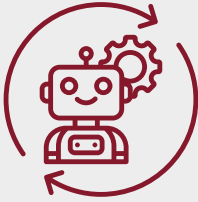


ARTIFICIAL INTELLIGENCE



Artificial Intelligence (AI) engineers design, build, and train models for tasks like image recognition, natural language processing, and recommendation systems. They use large datasets to create intelligent features in software, power autonomous systems like robots and self-driving vehicles, and develop custom AI chips. With expertise in machine learning, algorithm design, and decision-making, they're equipped for the rapidly evolving AI landscape. This interdisciplinary degree blends core concepts from Computer Science, Electrical and Computer Engineering, and Industrial and Systems Engineering.

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
CSCI 113 4	CSCI 114 CSCI 113 4	CSCI 170 CSCI 113 4	CSCI 360 CSCI 114, 170 4	CSCI 270 CSCI 114, 170 4	CSCI 467 CSCI 114, CSCI 170, EE 141, ISE 225 or EE 460 CSCI 113 4	TRACK COURSE 4	TRACK CAPSTONE 4
ENGR 102 2	ENGR 103 (CSCI 113) 2	ENGR 203 ENGR 103 (CSCI 114) 2	ISE 220 MATH 126 or 129 4	ISE 225 ISE 220 4	TRACK COURSE 4	TRACK COURSE 4	TRACK COURSE 4
MATH 125* (GE F) 4	MATH 126 or MATH 129* MATH 125 4	MATH 226 or MATH 229 MATH 126 or 129 4	ISE 330 EE 141, MATH 126 or 129 4	EIS 370 4	BIOLOGY ELECTIVE* 4	GE A 4	GE C 4
WRIT 150 4	EE 141 4	EE 109 CSCI 113 4	PHYS 151 or 161* (GE E) MATH 126 or 129 or 226 4	TRACK COURSE 4	WRIT 340 WRIT 150 4	GE B 4	FREE ELECTIVE 4
GE C 4	GESM (GE B) 4	OPTIONAL ELECTIVE 4	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2

See next page for course listing.



ARTIFICIAL INTELLIGENCE

PLEASE SEE PREVIOUS PAGE.



Mathematics (16 Units)

- MATH 125: Calculus I*
- MATH 126 or MATH 129: Calculus II*
- MATH 226 or MATH 229: Calculus III
- EE 141: Applied Linear Algebra for Engineering

Science (8 Units)

- PHYS 151: Mechanics, Oscillations, and Waves*
- **OR** PHYS 161: Advanced Principles of Physics I
- Biology Elective*

Engineering (74 Units)

- ENGR 102: Viterbi First-Year Academy
- ENGR 103: Artificial Intelligence: An Introduction
- ENGR 203: Artificial Intelligence: Exploration in Current Applications
- CSCI 113: Programming Fundamentals for Computing
- CSCI 114: Programming for Applications of Computing
- CSCI 170: Discrete Methods in Computer Science
- CSCI 270: Introduction to Algorithms and Theory of Computing
- CSCI 360: Artificial Intelligence: Principles and Foundations
- CSCI 467: Foundations of Machine Learning
- **OR** EE 460: Machine Learning for Engineers
- EE 109: Introduction to Embedded Systems
- ISE 220: Foundations of Probability Modeling
- ISE 225: Foundations of Data Analysis
- ISE 330: Optimization
- EIS 370: Ethical Issues in Artificial Intelligence

Writing (8 Units)

- WRIT 150: Writing and Critical Reasoning
- WRIT 340: Advanced Writing and Critical Engagement

General Education (32 Units)

- GE A The Arts (1 Course)*
- GE B Humanistic Inquiry (2 Courses)
- GE C Social Analysis (2 Courses)
- GE D Life Sciences (1 Course)*
- GE E Physical Sciences (1 Course)*
- GE F Quantitative Reasoning (1 Course)*
- GE G,H Global Perspectives (2 Courses)*
- GESM General Education Seminar (1 Course)

Track Courses/Capstone

- See next page for Track options

SPECIAL NOTES

- **Courses with the * symbol** may be satisfied with AP, IB or A-Level exams. See page 18 for more information.
- **GESM and GE Courses:** Specific GE categories listed in the course plan are options; GE requirements can be fulfilled in any order. The GESM can be taken from GE categories A, B, or C. Students are encouraged to satisfy GE G and GE H with courses that also satisfy GE A, B, or C. See page 17 for more information about GE requirements, and consult your advisor for detailed assistance.
- **Biology Elective:** Choose from BISC 104, BISC 120, BISC 121, BISC 221, BISC 220, BISC 230, HBIO 205, PHIL 246
- **Grade Qualifier:** A grade of a C (2.0) or better is required for CSCI 113, CSCI 114, CSCI 170, EE 141, MATH 125, MATH 126/129, and MATH 226/229. Courses with a grade of C- or below must be repeated; courses may only be retaken once with department approval.

MAJOR TRACKS FOR ARTIFICIAL INTELLIGENCE

AI Systems and Operations Engineering

THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING
CSCI 270 CSCI 114, 170 4	CSCI 467 CSCI 114, CSCI 170, EE 141, ISE 225 or EE 460 CSCI 113 4	ISE 382 4	ISE 430 MATH 226/229, ISE 325, 330 4
ISE 225 ISE 220 4	ISE 325 CSCI 113, ISE 225, EE 141, MATH 226/229 4	TRACK ELECTIVE 4	ISE 480 CSCI 113, ISE 382 4
EIS 370 4	BIOLOGY ELECTIVE* 4	GE A 4	GE C 4
ISE 227 4	WRIT 340 WRIT 150 4	GE B 4	FREE ELECTIVE 4
OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2

Choose **one** Track Elective from the following:
ISE 315, ISE 435, ISE 440, ISE 470

Hardware Systems for AI

THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING
CSCI 270 CSCI 114, 170 4	CSCI 467 CSCI 114, CSCI 170, EE 141, ISE 225 or EE 460 CSCI 113 4	EE 462 EE 460 or CSCI 467 4	EE 496 EE 354 or EE 460 4
ISE 225 ISE 220 4	EE 354 EE 109 4	TRACK ELECTIVE 4	EE 461 CSCI 114, EE 460 or CSCI 467 4
EIS 370 4	BIOLOGY ELECTIVE* 4	GE A 4	GE C 4
EE 250 EE 109 4	WRIT 340 WRIT 150 4	GE B 4	FREE ELECTIVE 4
OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2

Choose **one** Track Elective from the following:
EE 451, EE 454, EE 456, EE 457, EE 477

Computational Foundations and Applications

THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING
CSCI 270 CSCI 114, 170 4	CSCI 467 CSCI 114, CSCI 170, EE 141, ISE 225 or EE 460 CSCI 113 4	TRACK ELECTIVE 4	CSCI 460 CSCI 201, CSCI 360, EIS 370, CSCI 467 or EE 360 4
ISE 225 ISE 220 4	TRACK ELECTIVE 4	TRACK ELECTIVE 4	TRACK ELECTIVE 4
EIS 370 4	BIOLOGY ELECTIVE* 4	GE A 4	GE C 4
CSCI 201 CSCI 114 4	WRIT 340 WRIT 150 4	GE B 4	FREE ELECTIVE 4
OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2

Choose **four** Track Electives from the following:
CSCI 444, CSCI 445, CSCI 452, CSCI 461, CSCI 468,
CSCI 469, EE 456