

Certificate in Artificial Intelligence Fundamentals and Applications

The AI Fundamentals and Applications Certificate is designed for undergraduate students from all majors—both technical and non-technical—to gain a foundational understanding of artificial intelligence, explore its applications across disciplines, and consider the ethical and professional responsibilities associated with these technologies. The certificate includes four courses: AI Essentials, Writing with AI, a domain-specific AI course, and an AI Design Studio course. The goal of the certificate is to prepare the next-generation AI workforce—individuals who not only understand AI, but can apply it ethically, create innovative AI solutions, and integrate it effectively within their chosen fields. This structured, four-course sequence guides students from foundational concepts to domain-specific expertise and culminates in hands-on experience through a capstone project.

Requirements

A total of 12 credits are needed to complete the certificate including 9 credits of required courses and 3 credits of domain specific AI courses.

Required Courses		9
ENGINR 2550	Artificial Intelligence Essentials	3
INTDSC 3010	Writing with AI	3
or INTDSC 3010W	Writing with AI	
CMP_SC 4950	AI Design Studio	3
or INTDSC 4010	AI Design Studio	
Approved Domain Specific AI Courses		3
Domain Specific AI Course (See list below, approval required for consideration of other courses)		3
CMP_SC 4750	Artificial Intelligence I	3
or ECE 4750	Artificial Intelligence I	
CMP_SC 4720	Introduction to Machine Learning and Pattern Recognition	3
or ECE 4720	Introduction to Machine Learning and Pattern Recognition	
CMP_SC 4770	Introduction to Computational Intelligence	3
or ECE 4870	Introduction to Computational Intelligence	
ISE 4410	Data Analytics and Machine Learning for Operations Intelligence	3
INFOTC 3040	Python for Data Analytics and Machine Learning	3
HLTH_SCI 4100	Artificial Intelligence in Health Care	3
IS_LT 2315	Advancing Equity in K12 Classrooms Through Artificial Intelligence	1
MRKTNG 4510	Artificial Intelligence and Machine Learning Applications in Marketing	3
MRKTNG 4910	Data Analytics and Machine Learning for Business	3
PEA_ST 2291	Artificial Intelligence Big Data: Social, Political, Ethical Issues	3
POL_SC 2310	Artificial Intelligence, Government, and Policy	3