

TECHNOLOGY STUDIES: ARTIFICIAL INTELLIGENCE, AS

Program code: ARIN-AS-COT

Location: Capital, Northwestern

Program Description

The Technology Studies Artificial Intelligence Option associate degree program prepares students to develop and apply artificial intelligence (AI) solutions to problems in the fields of predictive analytics, natural language processing, and computer vision. The program develops students' knowledge and skills in computer programming, machine learning, mathematics and statistics, and enables students to use AI to enhance human capabilities in the fields of business. The program prepares students to transfer to a baccalaureate program in computer science or data science, or to acquire an entry level position in fields that utilize artificial intelligence, such as business, technology, healthcare, industrial and manufacturing industries.

Tech Studies Learning Outcomes

1. Apply mathematical, scientific and technological principles and concepts to identify and formulate solutions to technical problems.
2. Apply critical thinking and problem-solving skills to solve technical problems.
3. Demonstrate the ability to function on teams.
4. Recognize the need to engage in life-long learning.

Artificial Intelligence Specialization Learning Outcomes

1. Transition seamlessly into a Bachelor of Science Degree Program in Computer Science, Artificial Intelligence, or Technology Management.
2. Apply appropriate mathematical and scientific principles to Artificial Intelligence applications.
3. Demonstrate proficiency in developing and applying machine learning principles and algorithms to solve problems in business applications.
4. Apply knowledge and skills to develop, interpret, and apply natural language processing and computer vision algorithms.
5. Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Artificial Intelligence.
6. Demonstrate a good understanding of Artificial Intelligence principles/concepts.
7. Demonstrate a good understanding of mathematical and computer programming concepts.
8. Demonstrate the ability to think through a problem in a logical manner.
9. Organize and carry through to conclusion the solution to a problem.
10. Demonstrate good communication skills.
11. Demonstrate teamwork skills.

Degree Requirements

Code	Title	Credits
Technology Studies General Education Core		
ENG 1010	Composition	3
MATH 1610	Precalculus	4

ART Elective (course vetted for ARHX)		3
CHEM 1110	Concepts of Chemistry	4
or CHEM 1210	General Chemistry I	
Elective HISX - Historical Knowledge Course or Elective SBSX course in ECON		3
ENG 1080	Composition II: Technical Writing	3
or COMM 1301	Public Speaking	
CCS 1001	College and Career Success	3
Technology Studies Program Core		
PHYS 1201	General Physics I	4
or PHYS 2201	Calculus-Based Physics I	
Elective BHEL - Behavioral Science Elective - choose an ANTH, PSY or SOC course		3
MATH 1200	Statistics I	3-4
or MATH 1201	Statistics I with Computer Applications	
Artificial Intelligence Courses		
CSC 1203	Python Fundamentals	3
DTS 2205	Introduction to Artificial Intelligence	3
DTS 2220	Introduction to Machine Learning	3
MATH 2500	Calculus for Business and Social Science	3-4
or MATH 2600	Calculus I	
DTS 2230	Natural Language Processing	3
DTS 2240	Artificial Intelligence for Computer Vision	3
DTS 2290	Capstone Research	3
CIS, CSC, CST, or CYS Elective		3
Specialization Elective		3
Total Credits		60-62