What will I be learning?

The Master of Science in Artificial Intelligence (MSAI) provides comprehensive training in foundational computer science and artificial intelligence concepts. Designed specifically for students without an undergraduate degree in Computer Science or Computer Engineering, the program equips graduates with the technical skills necessary to transition into AI-focused roles across various industries. The MSAI is available in both in-person and online formats, offering flexibility to accommodate diverse learning needs.

Research Areas

Machine learning (ML), neural networks, deep learning, natural language processing (NLP), computer vision, robotics and autonomous systems, knowledge representation and reasoning, ethics and policy in AI, AI tools and frameworks, AI in healthcare, finance, education, marketing, and other industries.

Two Year Plan

Semester 1 (required courses)

COP 5008 Computing Essentials	2
COP 5532 Data Structures Essentials	2
COT 5105 Discrete Structures Essentials	2
CAI 5031 Mathematics for AI	3
Total	**10**

Semester 2 (required courses)

COP 5230 Object Oriented Programming	2
COT 5407 Algorithms Essentials	2
CAI 5005 Introductions to AI	3
CAI 5021 Ethical Issues in AI	3
Total	**10**

Semester 3 (required/electives)

COP 6536 Advances in Data Structures for IT	3
Deepening Electives (see below)	**6**
Broadening Electives (see below)	**3**
Total	**12**

Example Deepening Electives (take any 2):

CAI 5135 Data Mining:	3
CAI 5205 Deep Learning	3
CAI 5307 Natural Language Processing	3
CAI 5615 Affective Computing	3
CAI 5815 Autonomous Mobile Robots	3
CAI 5845 Computer Vision	3
CAI 5846 Digital Image Processing	3
CAP 5746 Interactive Data Visualization	3
CAP 6101 Mobile Biometrics	3
CAP 6109 Brain-Computer Interfaces	3
CAP 6455 Advanced Robotic Systems	3
CAP 6632 Automated Reasoning	3
CAP 6672 Robot Intelligence and Computer Vision	3
CIS 6900 Independent Study	1-19
CIS 6930 Special Topics	1-5

taken as: Human-Computer Interaction, Trustworthy AI Systems, Topics in NLP, Social Network Analysis, Security & Privacy in ML, Hardware Accelerators for ML, Augmented Reality, Computational Methods for Imaging, Smart & Connected Health, Seminar in AI

Example Broadening Electives

ISM 6900 Fundamentals of AI

RED 5449 AI in Literacy and Technology

JOU 5367 AI and the Future of Media

Or other graduate courses approved by the Director of Graduate Programs