

Bachelor of Science (B.S.)
Artificial Intelligence:
AI Systems Emphasis
MTH 110 Start

2026 – 2027
Catalog Year

1st Year				
Fall		Winter		Summer
MTH 110: Algebra	4	MTH 124: Precalculus	5	
General Education	3	CIS 162: Computer Science 1	4	
AI 201: Introduction to Artificial Intelligence	3	MTH 225: Discrete Structures: CS	3	
WRT 150: Strategies in Writing	4	COM 201: Speech	3	
or WRT 120 <u>and</u> WRT 130				
CIS 100: Computing Exploration Seminar	1			
Total	15	Total	15	
2nd Year				
Fall		Winter		Summer
MTH 204: Linear Algebra 1	3	MTH 205: Linear Algebra 2	3	
CIS 163: Computer Science 2	4	General Education	3	
STA 215: Intro to Statistics	3	CIS 263: Data Structures and Algorithms	3	
PHI 102 or PHI 204	3	CIS 241: System Level Programming & Utilities	3	
or PHI 204: Knowledge, Politics, and Social Media		CIS 290: Prof Responsibilities & Practices	3	
General Education	3			
Total	16	Total	15	
3rd Year				
Fall		Winter		Summer
AI Track Course	3	AI 421: Applied Computer Vision	3	CIS 490: Internship 2-5
AI 411: AI Ethics and Bias	3	CIS 335: Data Mining	3	
CIS 457: Data Communications	3	CIS 352: Operating Systems Essentials	3	
CIS 350: Introduction to Software Engineering	3	CIS 378: Applied Machine Learning	3	
General Education	3	General Education	3	
Total	15	Total	15	Total 2-5
4th Year				
Fall		Winter		Summer
AI 431: Natural Language Processing	3	AI 495: Artificial Intelligence Project	3	
AI 441: Edge AI	3	AI Track Course	3	
AI Track Course	3	AI Track Course	3	
WRT 350: Business Communications (SWS)	3	General Education	3	
General Education	3	General Education	3	
Total	15	Total	15	

- This is a suggested curriculum guide that might not be applicable to every student
- This suggested course sequence is intended as a general guide and may need to be adjusted based on course availability
- Student must have a **minimum of 120 credits** to graduate, with **58 of the 120 credits** being from a senior level institution and **18 of the last 30 credits** completed at GVSU

General Education Requirements

WRT 150: Strategies in Writing (grade of "C" or higher required) or WRT 120 and WRT 130 (grade of "C" or higher required in both)	Life Sciences
Physical Sciences	Philosophy and Literature (choice of PHI 102 or 204)
Arts	Mathematical Sciences (MTH 124)
Social Behavioral Sciences (COM 201)	Social Behavioral Sciences
Historical Analysis	U.S. Diversity
Global Perspectives	2 Supplemental Writing Skills Courses (prerequisite: WRT 130 or WRT 150)
Issue Course (prerequisite: must have 55+ credits)	Issue Course (prerequisite: must have 55+ credits)

Major Notes:

- 1.) Students must select one track to complete. See below for options.
- 2.) CIS 490 can be taken as 2-5 credits. Students will work with the Computing Internship Coordinator to determine the best number of credits for them.
- 3.) It is highly encouraged for students to "double dip" their general education requirements when possible.
 - a. Consider taking a course that fulfills the U.S. Diversity category and one Social and Behavioral Science course.
 - b. Consider taking a course that fulfills the Global Perspectives category and one Issues course.
- 4.) Two Supplemental Writing Skills (SWS) courses are required for graduation.

Complete one of the following AI Tracks (4 courses, 12 credits):

Track: AI Deployment and Operations

Required:

AI 445: Machine Learning Operations

Choose 3 of the following:

AI 402: Generative Artificial Intelligence
 AI 451: Reinforcement Learning
 CIS 163: Computer Science II
 CIS 350: Introduction to Software Engineering
 CIS 360: Information Management and Science
 CIS 418: Secure Software Engineering
 SE 413: Software Testing
 SE 422: Software Architecture and Design
 SE 430: Software Construction and Delivery

Track: AI and Cybersecurity

Required:

CIS 258: Introduction to Cybersecurity

Choose 3 of the following:

CIS 337: Network Systems Management
 CIS 358: Information Assurance
 CIS 418: Secure Software Engineering
 CIS 458: System Security
 CYB 420: Trustworthy AI
 CYB 453: Ethical Hacking

Track: Edge and Cloud AI

Required:

CIS 230: Hardware and Software
 CIS 373: Pervasive Computing

Choose 2 of the following:

CIS 337: Network Systems Management
 AI 445: Machine Learning Operations
 CIS 458: System Security
 SE 431: Software Virtualization

Track: AI and Business

Required:

CIS 331: Data Analysis Tools and Techniques or

CIS 335: Data Mining

Choose 3 of the following:

ACC 201 and ACC 202: Accounting for Non-Business Majors 1 & 2
 FIN 300: Fundamentals of Finance for Non-Business Majors
 MGT 300: Fundamentals of Management for Non-Business Majors
 MKT 300: Fundamentals of Marketing for Nonbusiness Majors

Track: AI and Healthcare

Required:

AI 489: Artificial Intelligence in Medical Imaging Informatics

Choose 3 of the following:

AHS 310: Equity in Health Care
 AHS 321: Ethical and Legal Responsibilities in Health Care
 AHS 330: Health Care- A Global Perspective
 AHS 340: Health Care Management
 AHS 352: Introduction to Holistic Health Care

Track: AI Design

Choose 4 of the following:

AI 489: Artificial Intelligence in Medical Imaging Informatics
 HCC 304: Usability Design and Evaluation
 HCC 311: User Experience Design
 HCC 403: User Experience Design
 HCC 452: AR/VR Design and Research