

Bachelor of Science (B.S.)
Artificial Intelligence:
AI Systems Emphasis
MTH 124 Start

2026 – 2027
Catalog Year

1st Year					
Fall		Winter		Summer	
MTH 124: Precalculus	5	COM 201: Speech	3		
CIS 162: Computer Science 1	4	CIS 163: Computer Science 2	4		
AI 201: Introduction to Artificial Intelligence	3	MTH 225: Discrete Structures: CS	3		
WRT 120: Strategies in Writing Stretch 1	3	WRT 130: Strategies in Writing Stretch 2	4		
or General Education		or WRT 150: Strategies in Writing			
		CIS 100: Computing Exploration Seminar	1		
Total	15	Total	15		
2nd Year					
Fall		Winter		Summer	
MTH 204: Linear Algebra 1	3	CIS 378: Applied Machine Learning	3		
CIS 241: System Level Programming & Utilities	3	MTH 205: Linear Algebra 2	3		
CIS 263: Data Structures and Algorithms	3	CIS 350: Introduction to Software Engineering	3		
CIS 290: Prof Responsibilities & Practices	3	AI 411: AI Ethics and Bias	3		
STA 215: Intro Applied Statistics	3	General Education	3		
Total	15	Total	15		
3rd Year					
Fall		Winter		Summer	
CIS 457: Data Communications	3	AI 421: Applied Computer Vision	3	CIS 490: Internship	2-5
CIS 352: Operating Systems Essentials	3	CIS 335: Data Mining	3	General Education	3
PHI 102: Ethics	3	CIS 352: Operating Systems Essentials	3		
or PHI 204: Knowledge, Politics, and Social Media		AI Track Course	3		
General Education	3	General Education	3		
General Education	3				
Total	15	Total	15	Total	5-8
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		
General Education	3	WRT 350: Business Communications (SWS)	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