

Bachelor of Science (B.S.)
Human Centered Computing
MTH 122 Start

2025 – 2026
Catalog Year

1st Year		
Fall MTH 122: College Algebra 3 CIS 162: Computer Science 1 4 HCC 201: Intro to HCC 3 WRT 150: Strategies in Writing 4 or WRT 120 <u>and</u> WRT 130 Total 14	Winter CIS 163: Computer Science 2 4 MTH 225: Discrete Structures: CS 3 COM 201: Speech 3 PSY 101: Intro to Psychology 3 Total 13	Spring/Summer
2nd Year		
Fall AI 201: Introduction to AI 3 STA 215: Intro Applied Statistics 3 CIS 290: Prof Responsibilities & Practices 3 HCC 304: Usability Design & Evaluation 3 General Education 3 Total 15	Winter CIS 263: Data Structures and Algorithms 3 STA 301: Questionnaire Design & Execution 3 HCC 311: User Interaction & Accessibility 3 PSY 361: Perception 3 or PSY 365: Cognition General Education 3 Total 15	Spring/Summer
3rd Year		
Fall AI 402: Intro to Generative AI 3 WRT 350: Business Communication (SWS) 3 Track Elective 3 HCC Elective 3 General Education 3 Total 15	Winter HCC 402: User Experience Research 3 CIS 320: Visualization of Data & Info 3 Track Elective 3 General Education 3 General Education 3 Total 15	Spring/Summer CIS 490: Internship 2-5 Total 2-5
4th Year		
Fall AI 411: AI Ethics and Bias 3 HCC 403: User Experience Design 3 HCC 452: AR/VR Design & Research 3 Track Elective 3 General Education 3 Total 15	Winter HCC 495: Human Centered Computing Project 3 HCC 431: Human-AI Interaction 3 HCC Elective 3 Track Elective 3 General Education 3 Total 15	Spring/Summer

- 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 the **final 30 of the 120 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
Arts	Mathematical Sciences (MTH 122)
Social Behavioral Sciences (COM 201)	Social Behavioral Sciences (PSY 101)
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) (CIS 320)	Issue Course (prerequisite: must have 55+ credits)

Major Notes:

- 1.) 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.
- 2.) 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.
- 3.) Two Supplemental Writing Skills (SWS) courses are required for graduation. WRT 350 will fulfill one SWS requirement. The remaining SWS requirement can be fulfilled via a general education category.

Complete one of the following HCC Tracks (12 credits):

Track: Human Centered AI

- Required:
 - o AI 402: Introduction to Generative AI (3 credits)
 - o AI 431: Natural Language Processing (3 credits)
 - o CIS 378: Applied Machine Learning (3 credits)
- Choose 1 of the following:
 - o AI 421: Applied Computer Vision (3 credits)
 - o AI 451: Reinforcement Learning (3 credits)

Track: Augmented & Virtual Reality and Game Development

- Required:
 - o CIS 357: Mobile Application Development (3 credits)
 - o CIS 376: Game Programming Techniques and Algorithms (3 credits)
 - o CIS 378: Applied Machine Learning (3 credits)
 - o HCC 453: AR/VR Development (3 credits)

Track: Human Centered Software Engineering

- Required:
 - o CIS 350: Introduction to Software Engineering (3 credits)
 - o SE 422: Software Architecture and Design (3 credits)
- Choose 2 of the following:
 - o AI 421: Applied Computer Vision (3 credits)
 - o CIS 376: Game Programming Techniques and Algorithms (3 credits)
 - o CIS 378: Applied Machine Learning (3 credits)
 - o HCC 453: AR/VR Development (3 credits)

HCC Major Elective Options:

Choose 2 courses from the following list. Make sure to select courses that you did not complete as part of your chosen track:

- AI 402: Introduction to Generative AI (3 credits)
- AI 411: AI Ethics and Bias (3 credits)
- AI 431: Natural Language Processing (3 credits)
- CIS 331: Data Analysis Tools and Techniques (3 credits)
- CIS 350: Introduction to Software Engineering (3 credits)
- CIS 376: Game Programming Techniques and Algorithms (3 credits)
- CIS 378: Applied Machine Learning (3 credits)
- HCC 453: AR/VR Development (3 credits)
- STA 315: Design of Experiments (3 credits)