

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

1st Year					
Fall		Winter		Summer	
MTH 122: College Algebra	3	CIS 260: App Dev in Visual Basic	4		
CIS 162: Computer Science 1	4	COM 201: Speech	3		
HCC 201: Intro to HCC	3	PSY 101: Intro to Psychology	3		
WRT 150: Strategies in Writing or WRT 120 <u>and</u> WRT 130	4	CIS 100: Computing Exploration Seminar	1		
		General Education	3		
<b>Total 14</b>		<b>Total 14</b>			
2nd Year					
Fall		Winter		Summer	
MTH 225: Discrete Structures: CS	3	CIS 357: Mobile App Development	3		
STA 215: Intro Applied Statistics	3	STA 301: Questionnaire Design & Execution	3		
CIS 290: Prof Responsibilities & Practices	3	HCC 311: User Interaction & Accessibility	3		
HCC 304: Usability Design & Evaluation	3	General Education	3		
General Education	3	General Education	3		
<b>Total 15</b>		<b>Total 15</b>			
3rd Year					
Fall		Winter		Summer	
HCC 402: User Experience Research	3	CIS 320: Visualization of Data & Info	3	CIS 490: Internship	2-5
WRT 350: Business Communication (SWS)	3	Track Elective	3		
Track Elective	3	HCC Elective	3		
Track Elective	3	General Education	3		
General Education	3	General Education	3		
<b>Total 15</b>		<b>Total 15</b>		<b>Total 2-5</b>	
4th Year					
Fall		Winter		Summer	
HCC 495: Human Centered Computing Project 1	3	HCC 496: Human Centered Computing Project 2	3		
HCC 403: User Experience Design	3	HCC Elective	3		
Track Elective	3	HCC Elective	3		
Track Elective	3	Track Elective	3		
General Education	3	General Education	3		
<b>Total 15</b>		<b>Total 15</b>			

- 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) <b>or</b> 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 TWO of the following HCC Tracks (18 credits total):

#### Track: Human-Centered AI

Required:

AI 201: Introduction to AI  
HCC 431: Human-AI Interaction

Choose 1 of the following:

AI 402: Introduction to Generative AI  
AI 411: AI Ethics and Bias

#### Track: Augmented & Virtual Reality

Required:

HCC 452: AR/VR Design and Research  
HCC 453: AR/VR Development  
HCC 454: Application of Mixed Reality in Health

#### Track: Human-Centered Game Design

Required:

HCC 321: Video Games and interaction  
DS 330: Game Culture

Choose 1 of the following:

DS 201: Digital Identities and Communities  
DS 202: Digital Data and Design  
CIS 376: Game Programming Techniques and Algorithm

#### Track: Health and Wellness

Required:

HCC 454: Applications of Mixed Reality in Health  
HCC 461: Brain Computer Interfaces  
HCC 473: Human-Computer Interaction in Healthcare

### HCC Major Elective Options – Select 3 courses (9 credits total):

Choose 3 courses from the following list. Make sure to select courses that you did not complete as part of your chosen track:

- AI 201: Introduction to AI
- ART 209: Graphic Design Basics
- CIS 263: Data Structure and Algorithms
- STA 315: Design of Experiments
- INT 323: Design Thinking to Meet Real-World Needs
- HCC 321: Video Games and Interaction
- FVP 324: 3D Computer Animation
- PSY 361: Perception
- CIS 378: Applied Machine Learning
- AI 402: Introduction to Generative AI
- AI 411: AI Ethics and Bias
- AI 421: Applied Computer Vision
- AI 431: Natural Language Processing
- HCC 431: Human-AI Interaction
- AI 451: Reinforcement Learning
- HCC 454: Applications of Mixed Reality in Health
- HCC 461: Brain Computer Interfaces