


















# COMPUTER APPLICATION DEVELOPMENT, EMPHASIS











 - General Education Course

 - Milestone course: a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

## Major

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

Code	Title	Credit Hours
<b>Core Curriculum</b>		
<i>Core 1: Critical Thinking</i>		
FYS 100	First Yr Sem Critical Thinking	3
STA 225 	Introductory Statistics (CT)	3
	Critical Thinking Course	3
<i>Core 2</i>		
ENG 101 	Beginning Composition	3
ENG 201 	Advanced Composition	3
CMM 103  	Fund Speech-Communication	3
MTH 140  	Applied Calculus	3
NRE 111 	Living Systems	4
	or BSC 104  Introduction to Biology	
	Core II Humanities	3
	Core II Social Science	3
	Core II Fine Arts	3
<i>Additional University Requirements</i>		
	Writing Intensive	3
	Writing Intensive	3
	Multicultural or International	3
CIT 490 	Capstone Project in CIT	3
	or CIT 470  Internship in CIT	
<b>Major-Specific</b>		
IST 150	Spreadsheet & Database Prin	3
CS 105 	Expl World with Computing (CT)	3
CS 110	Computer Science I	3
CS 120	Computer Science II	3
CS 210	Data Structures and Algorithms	3
CIT 260 	Instrumentation	3
CIT 265	C# NET Programming	3
	or CIT 266 Applied C++ Programming	
CIT 263 	Web Programming I	3
CIT 313 	Web Programming II	3


CIT 332 	Software Engineering I	3
CIT 333	Software Engineering II	3
CIT 352	Network Protocols and Admin	3
CIT 365 	Database Management	3
ART 214	Foundations: Grid/Chroma	3
	or ART 219 Foundations: Frame/Time	
MGT 320	Principles of Management	3
CIT 490 	Capstone Project in CIT (C)	3
	or CIT 470  Internship in CIT	
MTH 140  	Applied Calculus	3
MTH 220 	Discrete Structures	3
STA 225 	Introductory Statistics (CT)	3
NRE 212	Energy	3
NRE 111 	Living Systems	4
	or BSC 104  Introduction to Biology	
	Physical/Natural Science Elective	4


### Area of Emphasis-Specific

CIT 410	Electronic Commerce	3
CIT 466	Database Programming	3
CIT Technical 300/400 Elective		3
CIT Technical 300/400 Elective		3
CIT Technical 300/400 Elective		3
NRE 423	GIS and Data Systems	3
Free Elective		3
Free Elective		3
Free Elective		2

## Major Information

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- Coursework listed as “elective” may vary for each student. Students are encouraged to use elective hours toward a minor or toward prerequisites.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the Core II Humanities requirement as well as the University writing intensive requirement.
- Course offerings and course attributes are subject to change semesters. Please consult each semesters schedule of courses for availability and attributes.
- Math is based on an ACT Mathematics score of 24 or higher. Students with an ACT Mathematics score less than 24 will be placed in the appropriate prerequisite mathematics and science courses.
- The Computer and Information Technology major is a four-year program that requires a minimum of 120 credit hours, 40 of which must be at the 300-400 level.

 - General Education Course

 - Milestone course: a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

## Four Year Plan

A major in Computer and Information Technology provides a solid grounding in the information technology field. CIT is a cutting-edge program rooted and grounded in courses that are both highly theoretical while also extremely applied in nature. It focuses on the development of computer applications for business, industry, and education that run on the personal computer or that integrate various hardware pieces into the computer system as a whole. Students will learn the software engineering process and project management and learn to program in languages such as C++ and C#. Students also learn to specify, design, and build large-scale software systems for existing hardware.

Course	Title	Credit Hours
<b>First Year</b>		
<b>First Semester</b>		
IST 150	Spreadsheet & Database Prin	3
ENG 101 🌳	Beginning Composition	3
NRE 111 🌳	Living Systems	4
	or BSC 104 🌳 or Introduction to Biology	
	Multicultural or International	3
CS 105 🌳	Expl World with Computing (CT)	3
UNI 100	Freshman First Class	1
	Credit Hours	17
<b>Second Semester</b>		
CS 110	Computer Science I	3
CMM 103 🌳 🎓	Fund Speech-Communication	3
ENG 201 🌳	Advanced Composition	3
FYS 100	First Yr Sem Critical Thinking	3
MTH 140 🌳	Applied Calculus	3
	Credit Hours	15
<b>Second Year</b>		
<b>First Semester</b>		
CS 120	Computer Science II	3
CIT 260 🎓	Instrumentation	3
CIT 263 🎓	Web Programming I	3
Core II Fine Arts		3
MTH 220 🌳	Discrete Structures	3
	Credit Hours	15
<b>Second Semester</b>		
ART 214	Foundations: Grid/Chroma	3
	or ART 219 or Foundations: Frame/Time	
CIT 313 🎓	Web Programming II	3
CS 210	Data Structures and Algorithms	3
STA 225 🌳	Introductory Statistics (CT)	3
Social Science		3
	Credit Hours	15
<b>Third Year</b>		
<b>First Semester</b>		
CIT 265	C# NET Programming	3
	or CIT 266 or Applied C++ Programming	
CIT 332 🎓	Software Engineering I	3

CIT 365 🎓	Database Management	3
CIT Technical 300/400 Elective		3
Writing Intensive		3
	Credit Hours	15
<b>Second Semester</b>		
CIT 333 🎓	Software Engineering II	3
CIT 410	Electronic Commerce	3
CIT Technical 300/400 Elective		3
Physical/Natural Science Elective		4
Core II Humanities		3
	Credit Hours	16
<b>Fourth Year</b>		
<b>First Semester</b>		
CIT 352	Network Protocols and Admin	3
CIT 466	Database Programming	3
NRE 423	GIS and Data Systems	3
NRE 212	Energy	3
Writing Intensive		3
	Credit Hours	15
<b>Second Semester</b>		
CIT Technical 300/400 Elective		3
MGT 320	Principles of Management	3
Free Elective		3
CIT 490 🌳	Capstone Project in CIT	3
	or CIT 470 🌳 or Internship in CIT	
	Credit Hours	12
	Total Credit Hours	120