

GAME SIMULATION DEVELOPMENT, EMPHASIS

Course Requirements

- 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.

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
Core Curriculum		
<i>Core 1: Critical Thinking</i>		
FYS 100	First Yr Sem Critical Thinking	3
STA 150	Foundations of Statistics	3
CS 105	Expl World with Computing (CT)	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
Core II Humanities		3
NRE 111	Living Systems (or BSC 104 and BSC 104L)	4
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	
Major-Specific		
CIT 150	Spreadsheet and Database Apps	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 263	Web Programming I	3
CIT 266	Applied C++ Programming	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
STA 150	Foundations of Statistics	3
STA 150L	Foundations of Statistics Lab	1
NRE 111	Living Systems (or BSC 104 and BSC 104L)	4
NRE 212	Energy	3
MTH 220	Discrete Structures	3
Area of Emphasis-Specific		
PHY 201	College Physics I	3
PHY 202	General Physics I Laboratory	1
CIT 340	Game Development I:2D	3
CIT 440	Computer Graphics for Gaming	3
CIT 441	Game Development II:3D	3
CIT 443	Game Development III: AI	3
CIT 446	3D Modeling and Animation	3
CIT 447	Modeling/Simulation Dev	3
CIT 448	Mobile Game Development	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.
- PHY 201 College Physics I is based on an ACT Mathematics score of 27 or higher. Students with an ACT Mathematics score less than 27 will be placed in the appropriate prerequisite mathematics courses.
- MTH 140 Applied Calculus 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.

Semester Plan






A major in Computer and Information Technology provides a solid grounding in the information technology field. CIT is a cutting-edge program with courses that are both highly theoretical while also extremely applied in nature. The Area of Emphasis in Game/Simulation development combines sound principles of computer application development with computer game development. This connection

serves students who are coming to Marshall University with aspirations of developing computer, console, and mobile games.



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First Year



First Semester		Credit Hours
STA 150 	Foundations of Statistics	3
STA 150L 	Foundations of Statistics Lab	1
ENG 101 	Beginning Composition	3
NRE 111 	Living Systems (or BSC 104 and BSC 104L)	4
CS 105 	Expl World with Computing (CT)	3
UNI 100	Freshman First Class	1
Credit Hours		15

Second Semester




CS 110	Computer Science I	3
ENG 201 	Advanced Composition	3
FYS 100	First Yr Sem Critical Thinking	3
MTH 140 	Applied Calculus	3
CIT 150	Spreadsheet and Database Apps	3
Credit Hours		15

Second Year

First Semester



CS 120	Computer Science II	3
CIT 260	Instrumentation	3
CIT 263	Web Programming I	3
PHY 201 	College Physics I	3
PHY 202 	General Physics I Laboratory	1
Core II Fine Arts		3
Credit Hours		16

Second Semester

ART 214 or ART 219	Foundations: Grid/Chroma or Foundations: Frame/Time	3
CIT 313 	Web Programming II	3
CS 210	Data Structures and Algorithms	3
MTH 220 	Discrete Structures	3
CMM 103 	Fund Speech-Communication	3
Credit Hours		15

Third Year

First Semester

CIT 332 	Software Engineering I	3
CIT 365 	Database Management	3
CIT 340	Game Development I:2D	3
CIT 266	Applied C++ Programming	3
Core II Social Science (M/I)		3
Credit Hours		15

Second Semester

CIT 333 	Software Engineering II	3
CIT 441	Game Development II:3D	3



CIT 446	3D Modeling and Animation	3
Core II Humanities		3
Free Elective		2
Credit Hours		14

Fourth Year

First Semester

CIT 352	Network Protocols and Admin	3
CIT 440	Computer Graphics for Gaming	3
CIT 447	Modeling/Simulation Dev	3
NRE 212	Energy	3
Writing Intensive		3
Credit Hours		15

Second Semester

CIT 443	Game Development III: AI	3
CIT 448	Mobile Game Development	3
MGT 320	Principles of Management	3
CIT 490  or CIT 470 	Capstone Project in CIT or Internship in CIT	3
Writing Intensive		3
Credit Hours		15
Total Credit Hours		120