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		
Core 1: Critical Thinking		
FYS 100	First Yr Sem Critical Thinking	3
STA 150 🦬	Foundations of Statistics	3
CS 105 🦬	Expl World with Computing (CT)	3
Core 2		
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 🦬 & NRE 111L 🦬	Living Systems and Living Systems Lab (or BSC 104 and BSC 104L)	4
Core II Social Science		3
Core II Fine Arts		3
Additional University Requirements		
Writing Intensive		3
Writing Intensive		3
Multicultural or International		3
CIT 490 🦬 or CIT 470 🦬	Capstone Project in CIT Internship in CIT	3
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 or ART 219	Foundations: Grid/Chroma Foundations: Frame/Time	3
MGT 320	Principles of Management	3
CIT 490 🦬 or CIT 470 🦬	Capstone Project in CIT (C) Internship in CIT	3
MTH 140 🦬	Applied Calculus	3
STA 150 🦬	Foundations of Statistics	3
STA 150L 🦬	Foundations of Statistics Lab	1
NRE 111 🦬 & NRE 111L 🦬	Living Systems and Living Systems Lab (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/Simuation 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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🎓 - Milestone course: a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

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 🦬 & NRE 111L 🦬	Living Systems and Living Systems Lab (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/Simuation 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**