SCHOOL OF COMPUTING UNDERGRAD COURSE OFFERING LIST FOR CS/EAE MAJORS Availability subject to change 06.27.2023

Required Core Courses

Course #	Course Name	Credits	Semester	Required Pre-Reqs (C- minimum grade needed)
CS 1400	Introduction to Computer Programming	4	Fall/Spring	Co-Req: Math 1050
CS 1410	Intro to Object-Oriented Programming	4	Fall/Spring	CS 1400, Co-Req: Math 1060
CS 1420	Accelerated Intro to Object-Oriented Prog	4	Fall/Spring	Co-Req: Math 1060
CS 2100	Discrete Structures	3	Fall/Spring	CS 1410 or CS 1420 & Math 1210
CS 2420	Intro to Algrithms & Data Structures	4	Fall/Spring	CS 1410 or CS 1420
CS 3100	Models of Computation	3	Fall/Spring	CS 2100 & major status
CS 3130	Engineering Probability & Statistics	3	Fall/Spring	Math 1220 & major status
CS 3200	Scientific Computing	3	Spring	Math 2270 & major status
CS 3500	Software Practice	4	Fall/Spring	CS 2420 & major status
CS 3505	Software Practice II	3	Fall/Spring	CS 3500 & major status
CS 3810	Computer Organization	4	Fall/Spring	CS 2420 & major status
CS 4150	Algorithms	3	Fall/Spring	CS 2100, CS 3500 & major status
CS 4400	Computer Systems	3	Fall/Spring	CS 3810
EAE 4500	Senior Project I	3	Fall	EAE 3710 & EAE 3720
EAE 4510	Senior Project II	3	Spring	EAE 4500

EAE Core Requirements

Course #	Course Name	Credits	Semester	Required Pre-Reqs (C- minimum grade needed)
EAE 1050	Digital Content Creation	3	Fall/Spring/Summer	
EAE 2100	Intro to Game Design	3	Fall/Spring	
EAE 3010	Asset Pipeline	3	Fall/Spring/Summer	EAE 1050

EAE Requirements

Course #	Course Name	Credits	Semester	Required Pre-Reqs (C- minimum grade needed)
EAE 3660	Machinima	3	Fall/Spring	EAE 3010
EAE 3710	Traditional Game Development	4	Fall/Spring/Summer	EAE 3010 & major status
EAE 3720	Alternative Game Development	4	Fall/Spring/Summer	EAE 3010 & major status

Area Focus Electives: AI/Analytics

Course #	Course Name	Credits	Semester	Required Pre-Reqs (C- minimum grade needed)
CS 3190	Foundations of Data Analysis	3	Fall	CS 2100, CS 2420 & Math 2270; Co-Reqs: CS 3130/ECE 3530 or Math 3070
CS 4300	Artificial Intelligence	3	Fall	CS 3500, CS 4150, CS 3130 & major status
CS 5140	Data Mining	3	Spring	CS 3500, CS 3190 & major status
CS 5340	Natural Language Processing	3	Fall	CS 3505 & major status
CS 5350	Machine Learning	3	Fall/Spring	CS 3500 & CS 3190

Area Focus Electives: Core/Fundamentals

Course #	Course Name	Credits	Semester	Required Pre-Reqs (C- minimum grade needed)
CS 3520	Programming Language Concepts	3	Fall	CS 3500 & major status
CS 4470	Compilers	3	(every other) Spring	CS 3100, CS 4400 & major status
CS 5150	Advanced Algorithms	3	Fall	CS 4150 & major status
CS 5460	Operating Systems	3	Spring	CS 4400 & major status

Area Focus Electives: Human Centered Computing

Course #	Course Name	Credits	Semester	Required Pre-Reqs (C- minimum grade needed)
CS 3540	Designing Human-Centered Experiences	3	Fall/Spring	CS 2420 & major status
CS 4530	Mobile Application Programming	3	Spring	CS 3505 & major status
CS 4600	Intro Computer Graphics	3	Fall	CS 3500, Math 2270 or 2250 & major status
CS 5360	Virtual Reality	3	Fall	CS 3500 & major status

Area Focus Electives: Infrastructure

Course #	Course Name	Credits	Semester	Required Pre-Reqs (C- minimum grade needed)
CS 3550	Web Software I	3	Fall	CS 3500 & major status
CS 4440	Computer Security	3	Fall/Spring	CS 3500 & major status
CS 4480	Computer Networks	3	Spring	CS 3500 & major status
CS 4550	Web Software II	3	Spring	CS 3550 & major status
CS 5530	Database Systems	3	Spring	CS 3500 & major status