

Bachelor of Science in Computer Game Design & Development



This is a GATED PROGRAM
Catalog Year: 2018-2019

Updated 5/7/2019
Total Degree Credit Hours: 120

General Education Requirements (See Degreeworks for Prerequisites)

A-1	ENGL 1101 Composition I	3	
	ENGL 1102 Composition II	3	
A-2	MATH 1113/MATH 1112 Precalculus / Trigonometry	3	

Area A: Essential Skills (10 credit hours)

All Area A courses must be completed within the first 30 credit hours with a grade of C or higher.

B-1	ECON 1000 Contemporary Economic Issues	2	
B-2	COM 1100 Human Communication	3	

Area B: Institutional Options (5 credit hours)

COM 1100 is essential for Software Engineering majors.

C-1	ENGL 2110, 2111, 2112, 2120, 2121, 2122, 2130, 2131, 2132, or 2300	3	
C-2	ART 1107, MUSI 1107, DANC 1107, or TPS 1107	3	

Area C: Humanities, Fine Arts, and Ethics (6 cr hrs)

Choose one course from each area.

D-1	MATH 1190 Calculus I	4	
D-2	Group 1: BIOL 1107/L, CHEM 1211/L, PHYS 1111/L, or PHYS 2211/L	8	
	Group 2: BIOL 1108/L, CHEM 1212/L, PHYS 1112/L, or PHYS 2212/L		

Area D: Science, Math, and Technology (12 cr hrs)

CGDD majors must complete two 4-credit hour science courses. "L" denotes the corresponding Lab course. Physics (Trigonometry-based) are the recommended science courses.

E-1	POLS 1101 American Government	3	
E-2	HIST 2111 or 2112 US History	3	
E-3	HIST 1100, 1111, or 1112 World History	3	
E-4	CRJU 1101, GEOG 1101, PSYC 1101, SOCI 1101, STS 1101, ANTH 1102, or ECON 2100	3	

Area E: Social Sciences (12 credit hours)

Choose one course from each area for E-2, E-3, & E-4.

Area F Lower Division Major Requirements

		Prerequisites	
CSE 1321/L	Programming & Problem Solving I	Co-req w/ MATH 1112, 1113, 1190 or CSE 1300	4
CSE 1322/L	Programming & Problem Solving II	Minimum grade of 'B' in CSE 1321/L	4
MATH 2345	Discrete Mathematics <i>or</i>	MATH 1112/1113/1190	3
CSE 2300	Discrete Structures for Computing	MATH 1112/1113/1190 & CSE 1321/L	
MATH 2332	Probability and Data Analysis	MATH 1190	3
CGDD 2002	Fundamentals of Game Design	CSE 1322/L	4
Carryover credit hour from Area D Group 2 Science Lab		See Area D Science requirement	1

CSE 1321/L and CSE 1322/L must have a minimum grade of 'B.'

Upon completing CSE 1322/L with a minimum grade of 'B,' students should request to have their major changed to the fully admitted Computer Game Design & Development major.

Free Electives (7 credit hours)

CSE 1300 is highly recommended for students who are new to programming and have available free elective credits to complete.

Upper Division Major Courses

CSE 3801 Professional Practices and Ethics	CSE 1322/L	2	
CS 3305/L Data Structures	CSE 1322/L & (MATH 2345/CSE 2300)	4	
CS 4242 Artificial Intelligence	CS 3305/L	3	
CS 4306 Algorithm Analysis	CS 3305/L	3	
CS 4722 Computer Graphics and Multimedia	CS 3305/L	3	
SWE 3313 Intro to Software Engineering	CSE 1322/L	3	
SWE 3643 Software Testing and Quality Assurance	SWE 3313	3	
SWE 4324 User-Centered Design	SWE 3313	4	
CGDD 3103 Application Extension and Scripting	CGDD 2002 & CSE 1322/L	3	
CGDD 4003 Digital Media and Interaction	CGDD 3103	3	
CGDD 4203 Mobile and Casual Game Development	CGDD 4003	3	
CGDD 4303 Educational and Serious Game Design	CGDD 4003	3	
CGDD 4803 Studio	CGDD 4003	3	
CGDD 4814 Capstone	CGDD 4803	4	

All major courses must have a minimum grade of 'C,' except for CSE 1321/L and CSE 1322/L, which must have a minimum grade of 'B.'

Upper-Level Concentration (Pick 1) – 9 credit hours

Media-Production

Prerequisites

MATH 3260 Linear Algebra	MATH 1190	3	
CGDD 4113 3D Modeling and Animation	CS 3305/L	3	
CGDD 4603 Production Pipeline and Rendering	CS 4722	3	

Simulations-Informatics (pick 3)

CSE 3153 Database Systems	CSE 1322/L	3	
CS 4504 Distributed Computing	CS 3502	3	
CGDD 4703 Data Modeling and Simulation	MATH 2332	3	
CS 4999 Special Topics in Modeling and Simulation	Department Permission	3	

Content Creation *

CGDD 4113 3D Modeling and Animation	CS 3305/L	3	
<i>Choose 2 of the following four courses</i>			
MEBU 4490/01/04/05/06 Creative Adaptability	Permission of MEBU Director	3	
MEBU 3398 London Study Abroad/Internship	Permission of MEBU Director	1-3	
MEBU 3370 Fundamentals of Audio Production and Technology	MEBU 2270	3	
MEBU 4470 Advanced Audio Production and Technology	MEBU 3370	3	

Educational-Serious

Prerequisites

CGDD 4313 Designing Online Learning Content and Environments	Department Permission	3	
TCOM Two Approved Courses	Varies	3	
TCOM _____	Varies	3	

Computer Science (courses not duplicative with major req's)

CS _____	Varies	3	
CS _____	Varies	3	
CS _____	Varies	3	

Distributed-Mobile

SWE 3683 Embedded Systems Analysis & Design	CS 3305/L	3	
CS 4504 Distributed Computing	CS 3502	3	
CS 4622 Computer Networks	CS 3503/L	3	

Planning-Management (pick 3)

MGT 4122 Venture Management	MGT 3100 & Permission from Coles	3	
ENTR 4001 Entrepreneurial Mind	Permission from Coles	3	
SWE 3623 Software Systems Requirements	SWE 3313 & MATH 2345/CSE 2300	3	
SWE 4663 Software Project Management	SWE 3313 & MATH 2232	3	

* Contact CCSE Academic Advising if you are in, or considering, this concentration to discuss course options and enrollment permission procedure.