

# Bachelor of Science in Computer Game Design & Development



This is a GATED PROGRAM  
Catalog Year: 2017-2018

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	3	
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.

## Upper Division Major Courses

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

Prerequisites				Prerequisites			
<b>Media-Production</b>				<b>Educational-Serious</b>			
<b>MATH 3260</b> Linear Algebra	MATH 1190	3		<b>CGDD 4313</b> Designing Online Learning Content and Environments	Department Permission	3	
<b>CGDD 4113</b> 3D Modeling and Animation	CS 3305/L	3		<b>TCOM</b> Two Approved Courses	Varies	3	
<b>CGDD 4603</b> Production Pipeline and Rendering	CS 4722	3		<b>TCOM</b> _____	Varies	3	
<b>Simulations-Informatics (pick 3)</b>							
<b>CSE 3153</b> Database Systems	CSE 1322/L	3					
<b>CS 4504</b> Distributed Computing	CS 3502	3					
<b>CGDD 4703</b> Data Modeling and Simulation	MATH 2332	3					
<b>CS 4999</b> Special Topics in Modeling and Simulation	Department Permission	3		<b>Distributed-Mobile</b>			
				<b>SWE 3683</b> Embedded Systems Analysis & Design	CS 3305/L	3	
				<b>CS 4504</b> Distributed Computing	CS 3502	3	
				<b>CS 4622</b> Computer Networks	CS 3503/L	3	
				<b>Planning-Management (pick 3)</b>			
				<b>MGT 4122</b> Venture Management	MGT 3100 & Permission from Coles	3	
				<b>ENTR 4001</b> Entrepreneurial Mind	Permission from Coles	3	
				<b>SWE 3623</b> Software Systems Requirements	SWE 3313 & MATH 2345/CSE 2300	3	
				<b>SWE 4663</b> 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.