

# Bachelor of Science in Computer Game Design and Development

Catalog Year: 2015-2016



Total Degree Credit hours: 120

## General Education Requirements (See KSU Catalog for Prerequisites)

## Area F Requirements

A-1	<b>ENGL 1101</b> Composition I	3	
	<b>ENGL 1102</b> Composition II	3	
A-2	<b>MATH 1113</b> Pre-Calculus	3	

### Area A: Essential Skills (9 credit hours)

Must complete this area within first 30 credit hours.

B-1	<b>ECON 1000</b> Contemporary Economic Issues	2	
B-2	<b>COM 1100</b> Human Communication	3	

### Area B: Institutional Options (5 credit hours)

C-1	<b>ENGL 2000-level</b> Approved Literature	3	
C-2	<b>ART/DANC/MUSI/TPS 1107</b> Arts and Culture of the World	3	

### Area C: Humanities/Arts (6 credit hours)

Choose one course from both groups.

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

### Area D: Science, Math & Technology (12 credit hours)

Physics is a recommended science course. "L" denotes accompanying lab course. *Chem 1211/L is a pre/corequisite of BIOL 1107/L.*

E-1	<b>POLS 1101</b> American Government	3	
E-2	<b>HIST 2111/2112</b> US History	3	
E-3	<b>HIST 1100/1111/1112</b> World History	3	
E-4	<b>STS 1101</b> Science, Technology and Society	3	

### Area E: Social Sciences (12 credit hours)

Choose one course from each group for requirements E-2 and E-3.

KSU 1101/1111/1121/1200	First Year Seminar	3	
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F-1	<b>CSE 1301</b> Programming and Problem Solving I	No Prerequisite	4	
F-2	<b>CSE 1302</b> Programming and Problem Solving II	CSE 1301	4	
F-3	<b>CSE 2300</b> Discrete Structures OR <b>MATH 2345</b> Discrete Math	CSE 1301/MATH 1113	3	
F-4	<b>MATH 2332</b> Intro to Probability and Data Analysis	MATH 1111 or higher	3	
F-5	<b>CGDD 2002</b> Fundamentals of Game Design	No Prerequisite	3	
1 hour from Area D				

Note: Students must have a C or better in all courses that are IT, CS, CSE, SWE, CGDD.

## Upper Division Major Courses

	Prerequisites		
<b>CSE 3801</b> Professional Practices and Ethics	CSE 1301	2	
<b>CS 3304</b> Data Structures	CSE 1302, SWE 3313, & MATH 2345 or CSE 2300	4	
<b>CS 4306</b> Algorithm Analysis	CS 3304	3	
<b>CS 4242</b> Artificial Intelligence	CS 3304	3	
<b>CS 4722</b> Computer Graphics and Multimedia	CS 3304	3	
<b>SWE 3313</b> Introduction to Software Engineering	CSE 1302	3	
<b>SWE 3643</b> Software Testing and Quality Assurance	SWE 3313	3	
<b>SWE 4324</b> User-Centered Design	CSE 1302	4	
<b>CGDD3103</b> Application Extension and Scripting	CGDD 2002 (CSE 1302 Recommended)	3	
<b>CGDD4003</b> Digital Media and Interaction	CGDD 2002 or CS 3304	3	
<b>CGDD4203</b> Mobile and Casual Game Development	CGDD 4003 or CSE 3203	3	
<b>CGDD4303</b> Educational and Serious Game Design	CGDD 4003	3	
<b>CGDD4803</b> Studio	CGDD 4003	3	
<b>CGDD4814</b> Capstone	CGDD 4803	4	
<b>Free Electives</b>	Varies	6	
<b>Concentration – See Right (Pick 1)</b>	Varies	9+	

\* CS 3502 (Operating Systems) should be taken as elective prior to the courses in the Distributed-Mobile concentration

Note: Students can define their own custom upper-level concentration under the guidance and approval of their CGDD advisor. This approval of a custom concentration must be granted prior to beginning the courses in the concentration.

Students must have a C or better in all courses that are IT, CS, CSE, SWE, CGDD

## Upper-Level Concentration (Pick 1)

Media-Production			
<b>MATH 3312</b> Linear Algebra	MATH 2202	4	
<b>CGDD 4113</b> 3D Modeling and Animation	CGDD 3103 and CS 4722	3	
<b>CGDD 4603</b> Production Pipeline and Rendering	CS 4722	3	

Distributed-Mobile *			
<b>SWE 3683</b> Embedded Systems Analysis & Design	CS 3502*	3	
<b>CS 4504</b> Distributed Computing	CS 3502*	3	
<b>CS 4622</b> Computer Networks	CS 3501*	3	

Educational-Serious			
<b>TCOM</b> Two Approved Courses	Varies	6	
<b>CGDD 4313</b> Designing Online Learning Content and Environments	TCOM 3030 or other approved TCOM course	3	

Planning-Management (pick 3)			
<b>MGT 3100</b> Management and Behavior Sciences	No Prerequisite	3	
<b>MGT 4185</b> Technology Management	MGT 3100	3	
<b>MGT 4120</b> Venture Management	MGT 3100	3	
<b>MGT 4121</b> Entrepreneurship and Creativity	Department Permission	3	
<b>SWE 3623</b> Software Systems Requirements	SWE 3313 & MATH 2345 or CSE 2300	3	
<b>SWE 4663</b> Software Project Management	SWE 3313 & MATH 2232	3	

Simulations-Informatics (pick 3)			
<b>CSE 3153</b> Database Systems	CSE 1302	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	