Bachelor of Science in Computer Game Design & Development

Catalog Year: 2025-2026

Total Degree Credit Hours: 120

I Institutional Priority	2 Classes 5 credit hours	**Complete the following course:** ECON 1000	**Complete one course from the following:** AMST 1102, ASIA 1102, BLCK 1102, COMM 1100, GWST 1102, ISD 2700, LALS 1102, LDRS 2300, PAX 1102, POLS 2401, RELS 1102
M Mathematics & Quantitative Skills	1 Class 3 credit hours	**Complete the following course:** MATH 1113	
P Political Science & U.S. History	2 Classes 6 credit hours	**Complete the following course:** POLS 1101	**Complete one course from the following:** HIST 2111 or HIST 2112
A Arts, Humanities & Ethics	2 Classes 6 credit hours	**Complete one course from the following:** CHIN 1001, CHIN 1002, ENGL 2110, ENGL 2120, ENGL 2130, ENGL 2140, FREN 1001, FREN 1002, GRMN 1001, GRMN 1002, HEBR 1001, HEBR 1002, ITAL 1001, ITAL 1002, JAPN 1001, JAPN 1002, KOR 1001, KOR 1002, LATN 1001, LATN 1002, PHIL 2010, PORT 1001, PORT 1002, RUSS 1001, RUSS 1002, SPAN 1001, SPAN 1002, WLC 1001, WLC 1002, WLC 2209	**Complete one course from the following:** ART 1107, DANC 1107, MUSI 1107, TPS 1107
C Communication in Writing	2 Classes 6 credit hours	**Complete the following course:** ENGL 1101	**Complete the following course:** ENGL 1102
T Technology, Mathematics, & Science	3 Classes 12 credit hours	**Complete the following course:** MATH 1190	**Select two course pairs from the following for a total of 8 credit hours:** CHEM 1211 **and** CHEM 1211L CHEM 1212 **and** CHEM 1212L PHYS 1111 **and** PHYS 1111L PHYS 1112 **and** PHYS 1112L PHYS 2211 **and** PHYS 2211L PHYS 2212 **and** PHYS 2212L BIOL 1107 **and** BIOL 1107L BIOL 1108 **and** BIOL 1108L *Please note: You CANNOT take both PHYS 1111/L and PHYS 2211/L nor PHYS 1112/L and PHYS 2212/L*
S Social Science	2 Classes 6 credit hours	**Complete one course from the following:** HIST 1100, HIST 1111 or HIST 1112	**Complete one course from the following:** ANTH 1102, CRJU 1101, ECON 2105, ECON 2106, GEOG 1101, PSYC 1101, SOCI 1101, or STS 1101

Core Field of Study (18 credit hours)

Prerequisites			
CSE 1321/L Programming & Problem Solving I	Lecture & Lab must be taken at the same time	4	
CSE 1322/L Programming & Problem Solving II	Min. grade of 'B' in CSE 1321/L & MATH 1113/1190/2202*	4	
MATH 2345 Discrete Mathematics Or CSE 2300 Discrete Structures for Computing	MATH 1113 or MATH 1190 CSE 1321/L & MATH 1113/1190	3	
CGDD 2012 Fundamentals of Game Dsgn	None	2	
CGDD 2014 Fund. Of Game Dev.	CSE 1322*	1	
STAT 2332 Probability & Data Analysis	MATH 1190	3	

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

* - can be taken before or at the same time

+1 credit hour carried over from IMPACTS

	2-8 credit hours of 1000-4000 level coursework from the University Catalog, depending on concentration choice.

Major Requirements (46 credit hours)

Course	Prerequisites	Credits	
CSE 3153 Database Systems	CSE 1322/L	3	+ 1 credit hour carried over from IMPACTS
CSE 3801 Professional Practices & Ethics	CSE 1322/L	2	
CS 3305 Data Structures	MATH 2345 & CSE 1322/L	3	
CS 4306 Algorithm Analysis	CS 3305	3	
CS 4722 Computer Graphics & Multimedia	CS 3305	3	
SWE 3313 Intro to Software Engineering	CSE 1322/L	3	
SWE 3643 Software Testing & Quality Assurance	SWE 3313	3	
SWE 4324 User-Centered Design	SWE 3313	3	
CGDD 4242 Agent-based Artificial Intelligence	CS 3305	3	
CGDD 3103 Application Extension & Scripting	CGDD 2014	3	
CGDD 4003 Digital Media & Interaction	CGDD 3103 or CS 3305	3	
CGDD 4203 Intro to Mobile & Immersive Gaming	CGDD 4003	3	
CGDD 4303 Education & Serious Game Design	CGDD 4003	3	
CGDD 4803 Studio	CGDD 4003	3	
CGDD 4814 Studio 2	CGDD 4803	4	

Major Concentration (14 credit hours)

You must choose to complete 1 concentration. Amount of Free Elective credits required depends on number of defined concentration courses (e.g. 2 free elective credits for Creative Content) to bring the total to 14 credit hours.

Creative Content (12 credits)

Course	Prerequisites	Credits
CGDD 4113 3D Modeling & Anim.	CS 3305	3
MEBU 2270 Ent. Media Prod.	Permission	3
Select 2 from the following		
MEBU 3370 Fund. Of Audio Prod. & Tech.	MEBU 2270	3
MEBU 4470 Adv Audio Prod. & Tech.	MEBU 3370	3
MEBU 4490 Special Topics	Permission	3
WRIT 3125 Interactive Narrative & Game	ENGL 1102	3
TCID 2170 Intro Digital Media & Culture	None	3

Planning/Management (9 credits)

Course	Prerequisites	Credits
Choose 3 of the following		
MGT 3100 Mgmt & Behavioral Sci	Coles Permission	3
MGT 4185 Tech & Innovation Mgt	Coles Permission	3
ENTR 4122 Venture Analysis	MGT 3100	3
ENTR 4490 Special Topics	Coles Permission	3
SWE 3623 Software Systems Requirements	SWE 3313 & (CSE 2300 or MATH 2345)	3
SWE 4663 Software Proj. Mgt.	SWE 3313 & STAT 2332	3

Computer Science (9 credits)

Course	Prerequisites	Credits
CS		3
CS		3
CS		3

Must choose 3000-4000 level CS courses. Courses used for concentration must differ from those already required.

Simulation/Informatics (6 credits)

Course	Prerequisites	Credits
CGDD 4703 Data Modeling & Simulation	STAT 2332	3
3000-4000 level CSE/CGDD/SWE/CS/IT, Special Topics, Internship, or Directed Study as approved by advisor	Varies	3

Custom (9 credits)

Course	Prerequisites	Credits
Select 9 credit hours of 3000-4000 level courses with approval of advisor		
		3
		3
		3

Students are encouraged to consider the following:
CGDD 4400 Directed Study
IT 4490 Special Topics in Information Technology
SWE 4490 Special Topics in Software Engineering
CSE 4983 CSE Computing Internship

Educational/Serious (12 credits)

Course	Prerequisites	Credits
CGDD 4313 Dsgn Online Learning Cont.	None	3
TCOM 2010 Technical Writing	ENGL 1102	3
Select 2 additional 3000-4000 level TCOM courses		
TCOM		3
TCOM		3

Media Production (9 credits)

Course	Prerequisites	Credits
MATH 3260 Linear Algebra	MATH 1190	3
CGDD 4113 3D Modeling & Animation	CS 3305	3
CGDD 4603 Prod. Pipeline & Asset Mgt	CS 4722	3