

B.S. Game Design Engineering

130 Credits

Course	Title	Credits	Prerequisites
*Remedial Courses			
MATH003	Intermediate Algebra	**3	None
ENG050	Grammar & Composition	**3	None
***Additional Math Courses			
MATH116	Pre-Calculus	***4	Placement Test or MATH003
First Term			
SWE100	Introduction to Scripting: Python	3	None
DAA100	2D Design 1	3	None
DAA110	Sketching	3	None
MATH143	Calculus 1	4	Placement Test or MATH116 Pre-Calculus
ENG100	Composition & Critical Thinking		Placement Test or ENG050 Grammar & Composition
Second Term			
DAA106	Digital Imaging Concepts	3	DAA100 2D Design 1
SWE115	Web Programming: HTML5	3	None
SCI145	College Physics 1	4	MATH143 Calculus 1
MATH144	Calculus 2	3	MATH143 Calculus 1
General Education Course	Please see GenEd on page 3 & 4.		As Required
Third Term			
DAA240	Introduction to 3D Modeling	3	DAA100 2D Design 1
GAM225	Introduction to Game Production	3	None
MATH310	Discrete Mathematics	3	MATH144 Calculus 2
General Education Course	Please see GenEd on page 3 & 4.		As Required
General Education Course	Please see GenEd on page 3 & 4.		As Required
Fourth Term			
DAA267	Character Rigging	3	DAA240 Introduction to 3D Modeling
GAM235	Game Usability	3	GAM225 Introduction to Game Production
SWE315	C++ Programming: Object Oriented Programming	4	SWE100 Introduction to Programming: Python or SWE110 C Programming or SWE212 Java Programming
DMM110 or DMM125 or DMM130 or DMM270	Beta Business From The Ground Up 1 or Cover Your Assets or Digital Media Creativity or Project Management	3	None
MATH320	Geometry & Transformation	3	MATH144 Calculus 2
General Education Course	Please see GenEd on page 3 & 4.		As Required

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Course	Title	Credits	Prerequisites
Fifth Term			
SWE445	Advanced C++ Programming	3	SWE315 C++ Programming: Object Oriented Programming
DAA245	Texturing	3	DAA240 Introduction to 3D Modeling
GAM350	Game Design 1	3	ENG100 Composition & Critical Thinking
General Education Course	Please see GenEd on page 3 & 4.		As Required
General Education Course	Please see GenEd on page 3 & 4.		As Required
General Education Course	Please see GenEd on page 3 & 4.		As Required
Sixth Term			
SWE310	Data Structures and Algorithms	4	SWE110 C Programming or SWE315 C++ Object Oriented Programming
SWE375	Mobile Programming	3	SWE212 Java Programming or SWE315 C++ Object Oriented Programming
GAM355	Level Design 1	3	DAA240 Introduction to 3D Modeling and SWE100 Introduction to Scripting: Python
GAM376	Game Design 2	3	GAM350 Game Design 1
General Education Course	Please see GenEd on page 3 & 4.		As Required
General Education Course	Please see GenEd on page 3 & 4.		As Required
Seventh Term			
GAM415	Level Design 2	3	GAM355 Game Level Design 1
GAM475	Game Studio 1	3	Junior status required.
SWE447	GUI and Graphics Programming	3	SWE315 C++ Programming
General Education Course	Please see GenEd on page 3 & 4.		As Required
General Education Course	Please see GenEd on page 3 & 4.		As Required
Eighth Term			
GAM476	Game Studio 2	3	Junior status required.
INT401 Internship 1 or Elective	Internship 1 or Any Advisor approved course	3	As required
SWE449	Tools Programming	3	SWE315 C++ Programming: Object Oriented Programming
General Education Course	Please see GenEd on page 3 & 4.		As Required

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GENERAL EDUCATION REQUIREMENTS

45-48 CREDITS

Class	Applicable Courses	Credits	Prerequisites
*Remedial Classes			
ENG050	Grammar & Composition	**3	None
MATH003	Intermediate Algebra	**3	None
***Additional Math Class			
MATH116	Pre-Calculus	**4	Placement or MATH003
BASIC SKILLS – 9 credits in 3 areas			
WRITTEN COMMUNICATION – 3 credits			
ENG100	Composition & Critical Thinking		Pass English placement test
ORAL COMMUNICATION – 3 credits			
ENG250	Speech and Oral Communication		ENG100
ENG280	Apocalypse & The American Imagination		ENG100
ENG299ST	The Art of Argumentation		ENG100
CRITICAL THINKING – 3 credits			
ENG280	Apocalypse & The American Imagination		ENG 100
ENG220	Technical Writing		ENG100
ENG299 ST	The Art of Argumentation		ENG100
ENG300-ON	Essentials of Written Communication		ENG100
ENG250	Speech and Oral Communication		ENG100
HUMANITIES & ARTS – 9 credits in three areas			
ARTS – 3 credits			
HUM120	The Nature and History of Western Art		None
HUM122	World Music		None
HUM125	Music in Western Culture		None
HUM127	History of Music Technology		None
HUM130	Modern Art History		None
HUM140	Modern Art History and Film		None
HUM222	Music in the Recorded Age		ENG100
HUM227	Film History		ENG100
HUM228	Video Games and Society		ENG100
HUM228-ON	Video Games and Society		ENG100
HUM230	History of Animation		ENG100
HUM230-ON	History of Animation		ENG100
LETTERS – 3 credits			
ENG 228	Creative Writing		ENG100
ENG227	Scriptwriting		ENG100
ENG230	Classics of the World Stage		ENG100
ENG280	Apocalypse & The American Imagination		ENG100
WRITTEN COMMUNICATION II – 3 credits			
ENG227	Creative Writing		ENG100
ENG228	Scriptwriting		ENG100
ENG230	Classics of the World Stage		ENG100
ENG280	Apocalypse & The American Imagination		ENG100
ENG220	Technical Writing		ENG100
ENG299-ST	The Art of Argumentation		ENG100
ENG300-ON	Essentials of Written Communication		ENG100
ENG310	Classics of Western Drama		ENG100

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SOCIAL SCIENCES – 12 units in 3 areas		
HUMAN BEHAVIOR – 3 credits		
HUM228	Video Games & Society	ENG100
HUM228-ON	Video Games & Society	ENG100
ENG280	Apocalypse & The American Imagination	ENG100
TBD	Psychology	ENG100
COMPARATIVE SYSTEMS – 3 credits		
HUM200	History of the Modern World	ENG100
SSC200	U.S. Government	ENG100
SSC332	Global Political Economics	ENG100
SOCIAL ISSUES – 3 credits		
HUM200	History of the Modern World	ENG100
SSC200	U.S. Government	ENG100
MATH & SCIENCES for Non-Engineering Majors – 9 credits in two areas		
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 3 credits		
MATH115	Basic Topics in Mathematics	Pass Math Placement Exam
MATH116	Pre-Calculus (4 credits)	
MATH143	Calculus 1 (4 credits)	
PHYSICAL & BIOLOGICAL SCIENCES – 6 credits		
SCI100	Science of Motion: Humans, Animals, Objectives	MATH115
SCI110	Basic Concepts in Physics	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	MATH115
SCI145	College Physics I(4 credits)	MATH143
SCI200	General Science: Principles and Trends	MATH115
SCI220	Foundations of Musical Acoustics (Required for DAT)	MATH115
MATH & SCIENCES for Engineering Majors – 11 OR 12 credits in two areas		
MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING – 4 credits		
MATH143	Calculus 1 (4 credits)	MATH116 or placement
PHYSICAL & BIOLOGICAL SCIENCES – 7 or 8 credits		
SCI145	College Physics 1 (Required for all engineering students)	MATH143
SCI245	College Physics 2 (Required for SWE)	MATH143
SCI220	Foundations of Musical Acoustics (Required for DAT)	MATH143
SCI100	Science of Motion: Humans, Animals, Objectives	MATH115
SCI110	Basic Concepts in Physics	MATH115
SCI130	Basic Concepts of Anatomy and Physiology	MATH115
SCI200	General Science: Principles and Trends	MATH115
UPPER-DIVISION GENERAL EDUCATION – 6 credits		
300-LEVEL GE ELECTIVE – 3 credits		
HUM361	Contemporary Ethical Issues	Junior Status
SSC332	Global Political Economics	Junior Status
ENG310	Classics of Western Drama	Junior Status
ENG300-ON	Essentials of Written Communication	Junior Status
SENIOR-LEVEL RESEARCH & WRITING – 3 credits		
HUM400	Research & Writing Capstone Project	Senior status

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