

Degree Requirements for Bachelor of Science in Game Development

The BS in Game Development is a four-year degree program. In their first and to some extent their second years, students will focus on completion of the university’s General Education Program (42 US / 84 ECTS credits), with specialized courses in computer science and game development gradually introduced. Into the third and fourth year students will focus increasingly on technical topics that develop the student’s understanding and skills related to game development. To earn a Bachelor’s degree, students must satisfactorily complete at least 122 US / 244 ECTS credits, fulfill all the requirements for the BS in Game Development, and achieve a CGPA of 2.00 or higher.

The degree is designed to be completed in four years, assuming students make satisfactory progress toward the degree and do not interrupt their study. Students who withdraw or take a leave of absence from the program must meet requirements for returning that are outlined in the American University of Malta’s *Catalog*. Students are required to meet specific standards to progress, as well as the maximum time allowed to complete the program, which are also detailed in the *University Catalog*. If a degree is not completed within a period of six years all coursework in the major will be re-evaluated for its current relevance.

Requirements for BS in Game Development degree		US Credits	ECTS Credits
I.	University General Education Requirements	42	84
II.	Game Development Required Courses	71	142
III.	Free Electives	9	18
TOTAL		122	244

Bachelor of Science in Game Development

I. University General Education Requirements

42 US / 84 ECTS Credits

See Section: University General Education Requirements for Details

II. Game Development Major Courses

71 US / 142 ECTS Credits

Computer Science Foundation (16 US / 32 ECTS)

- CSC 210 Introduction to C++
- MAT 230 Discrete Mathematics
- CSC 220 Data Structures
- CSC 240 Computer Systems
- CSC 250 Computer Science Theory

Game Systems Foundation (19 US / 38 ECTS)

- CSC 320 Applied 3D Geometry
- CSC 330 Optimized C++
- CSC 350 Computer Graphics
- CSC 360 Game Design Patterns
- CSC 370 Game Networking

Game Design (14 US / 28 ECTS)

- CSC 340 Introduction to Game Design
- CSC 380 Level Design
- CSC 410 Game Modification
- CSC 420 3D Design and Modeling

Advanced Game Systems (18 US / 36 ECTS)

- CSC 430 Game Engine I Development
- CSC 440 Game Artificial Intelligence
- CSC 450 Game Engine II Development
- CSC 460 Game Physics
- CSC 470 Global Software Development

Capstone (4 US / 8 ECTS)

- CSC 480 Game Development Project

III. Free Electives

9 US / 18 ECTS Credits

Total Credits = 122 US / 244 ECTS

Sample Four-Year Schedule for Bachelor of Science in Game Development

First Year, Semester 1				First Year, Semester 2			
Course	Title	US CR	ETCS CR	Course	Title	US CR	ETCS CR
BIO 101	Unity of Life	4	8	CSC 210	Introduction to C++	3	6
	Lab for BIO 101			ENG 102	English Composition II	3	6
ENG 101	English Composition I	3	6	PHY 101	Introduction to the Physical Universe	4	8
HIS 101	History of the Mediterranean	3	6		Lab for PHY 101		
MAT 101	Introduction to Data Analysis, Probability, and Statistics	3	6	MAT 230	Discrete Mathematics	3	6
	Free Elective	3	6		Free Elective	3	6
TOTAL		16	32	TOTAL		16	32
Second Year, Semester 1				Second Year, Semester 2			
Course	Title	US CR	ETCS CR	Course	Title	US CR	ETCS CR
COM 101	Communication in a Multicultural Setting	3	6	CHE 101	Introduction to General Chemistry	4	8
CSC 220	Data Structures	3	6		General Chemistry Lab		
PSY 101	Introduction to Psychology	3	6	CSC 240	Computer Systems	4	8
	Arts/Humanities GE	3	6	CSC 250	Computer Science Theory	3	6
	Free Elective	3	6		Arts/Humanities GE	3	6
TOTAL		15	30	TOTAL		14	28
Third Year, Semester 1				Third Year, Semester 2			
Course	Title	US CR	ETCS CR	Course	Title	US CR	ETCS CR
SOC 101	Introduction to Sociology	3	6	CSC 350	Computer Graphics	4	8
CSC 320	Applied 3D Geometry	3	6	CSC 360	Game Design Patterns	4	8
CSC 330	Optimized C++	4	8	CSC 380	Level Design	3	6
CSC 340	Introduction to Game Design	3	6	CSC 410	Game Modification	4	8
	Arts/Humanities GE	3	6				
TOTAL		16	32	TOTAL		15	30
Fourth Year, Semester 1				Fourth Year, Semester 2			
Course	Title	US CR	ETCS CR	Course	Title	US CR	ETCS CR
CSC 370	Game Networking	4	8	CSC 450	Game Engine II Development	4	8
CSC 420	3D Design and Modeling	4	8	CSC 460	Game Physics	4	8
CSC 430	Game Engine I Development	4	8	CSC 470	Global Software Development	3	6
CSC 440	Game Artificial Intelligence	3	6	CSC 480	Game Development Project	4	8
TOTAL		15	30	TOTAL		15	30
TOTAL CREDIT HOURS: 122 US / 242 ECTS							
<i>US CR = U.S. Carnegie Credits</i>				<i>ECTS CR = European Credit Transfer System Credits</i>			