

## BSc Game Programming / Advanced Diploma Game Development

Courses offered at Brock University	Courses offered at Niagara College
<b>Year 1 Fall Term</b>	
COSC 1P02 – Introduction to Computer Science	BTGD9811/1P11 – Fundamental 3D and Multimedia Technologies
CPCF 1F25 – Media and Culture: Texts and Practices	
IASC 1P04 – New Media and Games	
MATH 1P66 – Mathematical Reasoning	
<b>Year 1 Winter Term</b>	
CPCF 1F25 – Media and Culture: Texts and Practices	BTGD9822/1P22 – Game Engine Fundamentals
COSC 1P03 – Introduction to Data Structures	
IASC 1P05 – Games, Genres, Aesthetics	
MATH 1P67 – Mathematics for Computer Science	
<b>Year 2 Fall Term</b>	
COSC 2P03 – Advanced Data Structures	BTGD9831/2P31 – Environment Design
IASC 2P04 – Ludology	BTGD9833/2P33 – Database Essentials
	BTGD9835/2P35 – Game Design and Development I
<b>Year 2 Winter Term</b>	
APCO 1P50 – Integrity and Literacy in the Information Age	BTGD9844/2P44 – Project Management
COSC 2P13 – Computer Systems	BTGD9845/2P45 – Game Design and Development II
IASC 2P05 – Game Design Paradigms	
<b>Year 3 Fall Term</b>	
COSC 3P71 – Introduction to Artificial Intelligence	BTGD9855/3Y55 – Game Production I
IASC 3P04 – Immersion and Simulation	BTGD9856/3Y56 – Advanced Game Programming Techniques
MATH 1P12 – Applied Linear Algebra	
PHYS 1P21 – Introductory Physics I	
<b>Year 3 Winter Term</b>	
COSC 2P05 – Programming Languages	BTGD9864/3P64 – The Game Industry Business
IASC 3P06 – Game Criticism	BTGD9865/3P65 – Game Production II
	BTGD9866/3P66 – Graphics Programming Fundamentals
<b>Year 4</b>	
IASC 4P02 – Video Game Research and Development	BTGD9876/4P76 – Network Game Programming
IASC 4F03 – Team-based Practicum in Game Design and Production	BTGD9877/4P77 – Mobile Game Development
<b>Select 1 credit from:</b> COSC 3P91 - Advanced Object-Oriented Programming COSC 3P94 - Introduction to Human Computer Interaction COSC 3P98 - Computer Graphics COSC 3Q95 - Internship in Game Programming <b>Select 1 credit from:</b> COSC 3P93 - Parallel Computing COSC 3P96 - Machine Learning COSC 3P99 - Computing Project COSC 3V90-3V99 - Computing Topics I COSC 4P13 - Operating Systems: Design and Implementation COSC 4P14 - Advanced Computer Networks	COSC 4P41 - Functional Programming COSC 4P42 - Formal Methods in Software Engineering COSC 4P50 - Introduction to Cyber Security COSC 4P61 - Theory of Computation COSC 4P78 - Robotics COSC 4P80 - Artificial Neural Networks COSC 4P81 - AI Programming COSC 4P82 - Genetic Programming COSC 4P83 - Reinforcement Learning COSC 4P84 - Natural Language Processing COSC 4P96 - Topics in Computational Intelligence COSC 4P98 - Topics in Computer Media and Digital Audio COSC 4V80-4V99 - Computing Topics II
MATH 1P97 – Calculus With Applications or MATH 1P98 – Practical Statistics	

Course list subject to change.