

## **Bachelors of Science (Hons) Games Technology**

### **1. ESSENTIAL QUALITIES AND ATTRIBUTES OF THE PROGRAMME'S GRADUATES**

Computer games, animations and simulations make up a substantial portion of the computer science industry today. This programme aims to prepare the student for computer game development and production opportunities. It enables the student to work in a multi-disciplinary environment and contribute to the exciting and ever-changing world of computer gaming using the latest technology tools.

### **2. RATIONALE OF THE PROGRAMME**

Games and role play have always been a fundamental part of the dynamics in human evolution. They have spanned the human lifetime from childhood to old-age in such a manner that they have become time tested vehicles for imparting education to any person capable of learning. The various motivations for game playing are fulfilment of fantasy, role play in extreme environments, challenging exercises to the mental faculties, or in proving oneself in adverse, imaginary situations. The computer game development industry has grown in leaps and bounds in recent years, creating a huge demand for highly skilled professionals in games technology. This programme has been designed to meet this demand.

The programme combines the concepts of Arts and Physics with programming techniques to create an end product which will help fire the imagination and thinking ability in the game player. It further combines theoretical and practical concepts about design, graphics, animation, audio and video in a compelling hands-on environment. It fosters team work and multi-disciplinary effort.

Gaming is an exciting field that is closely related to the subject of multimedia. The production of games with 2D or 3D animation requires the development of strategies that are exciting to the end user and requires creativity in addition to development skills. The curriculum includes the use of modern programming languages, operating systems and development tools. Developing an analytical ability to create and build multi-player gaming systems based on requirement specifications is an integral part of the programme.

## **Career Opportunities**

The programme opens several areas of opportunity for qualified and talented people to meet the needs of the industry, such as game designers, animation specialists, strategy developers, and game builders. This programme helps to meet the needs of the relatively new computer gaming industry for well qualified, skilful and knowledgeable professionals.

BSc (Hons) - Games Technology

	Year 1	CU Level	C.P	Year 2	CU Level	C.P	Year 3	CU Level	C.P	Summer	Year 4	CU Level	C.P	
Fall Semester	College Mathematics	0	10	Inferential Statistics	1	10	MARKETING MANAGEMENT	2	15	INTERNSHIP	Omani Studies	0	10	
	Computer Fundamentals	0	10	Business Communication	0	10	3-D MODELLING AND ANIMATION	1	15		SPECIAL TOPIC / SYSTEMS PROJECT MANAGEMENT	3	15	
	English for Special Purpose	0	10	DESIGN PERSPECTIVES	2	15	Web Applications Development	1	10		ADVANCED HUMAN COMPUTER INTERACTION	3	15	
	ART AND DESIGN BASICS	1	15	Multimedia	1	10	Console Game Programming	2	10		Multi-Player Games Development	3	10	
	FUNDAMENTALS OF MANAGEMENT	2	15	ELECTIVE - I	1	15	Graphics Programming	2	10		ELECTIVE - III	3	10	
			60			60			60					60
Spring Semester	Descriptive Statistics	0	10	Object Oriented Paradigm	1	10	Business Environment	0	10		Advanced Digital Technologies	3	10	
	Introduction to Internet	0	10	Object Oriented Programming	1	10	DIGITAL MEDIA PRODUCTION	2	15		Multi-Player Games Programming	3	10	
	Calculus and Numerical Methods	1	10	Console Game Development	2	10	Server Side Technologies	2	10		ELECTIVE - IV	3	10	
	ART THROUGH THE AGES	0	15	Physics for Computer Games	1	10	Visual and Audio Effects	2	10		PROJECT - II	3	30	
	INTRODUCTION TO PROGRAMMING	0	15	PROJECT - I	2	20	ELECTIVE - II	2	15					
			60			60			60				60	
	<i>Certificate in Design Technology</i>			<i>Diploma in Games Technology</i>			<i>Advanced Diploma in Games Technology</i>				<i>BSc (Hons) in Games Technology</i>			

WHITE	10	COLLEGE REQUIREMENT
TURQUOISE	10	DEPARTMENTAL REQUIREMENT
YELLOW	13	MAJOR ELECTIVES
RED	2	PROJECT
LAVENDAR	4	ELECTIVES

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Level 0	110
Level 1	115
Level 2	145
Level 3	110
	480
Level 2+Level 3	255

### **3. LEARNING OUTCOMES**

On successful completion of the programme, students should be able to:

- Demonstrate knowledge and understanding of the essential facts, concepts, principles and theories relating to games technology.
- Deploy appropriate theory, practices and tools for the specification, design, deployment and marketing of a game product.
- Evaluate a game product in terms of general quality attributes and assess the extent to which it meets the specification for its current use and future development.
- Present succinctly to a range of audiences (orally, electronically or in writing) rational and reasoned arguments that explain the construction, application and value of a computer game.
- Recognise the professional, commercial and ethical issues involved in the exploitation of games technology and be guided by the adoption of appropriate professional, ethical and legal practices.
- Work effectively as a member of a development team, recognising the different roles within a team and different ways of organising teams.

Transferable skills form an integral part of most modules. Self-directed learning and the necessity to work within tight deadlines are essential requirements in all parts of the curriculum. A variety of assessment techniques will ensure that students are given every opportunity to demonstrate skills in these areas.