

## ADVANCED DIPLOMA IN MULTIMEDIA COMPUTING

AdvDip (Multimedia Computing) - NQF Level 7 (120 credits)

**Qualification code: ADMC20**

SAQA ID: 111263, CHE NUMBER: H/H16/E166CAN

Campus where offered:

Soshanguve South Campus

### REMARKS

*a. Admission requirement(s):*

A National Diploma in Information Technology in the field of Multimedia, **or** a Diploma in Multimedia Computing, **or** a relevant bachelor's degree, **or** an equivalent qualification in Multimedia Computing at NQF Level 6 with a minimum of 360 credits.

Holders of any other equivalent South African or international qualification may also be considered, see Chapter 1 of Students' Rules and Regulations.

*b. Selection criteria:*

Admission is subject to selection. Prospective students will be evaluated based on the marks obtained in the previous qualification and/or work experience.

Acceptance is subject to available capacity according to the Student Enrolment Plan (SEP). Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, [www.tut.ac.za](http://www.tut.ac.za).

*c. Recognition of Prior Learning (RPL), equivalence and status:*

See Chapter 30 of Students' Rules and Regulations.

*d. Intake for the qualification:*

January only.

*e. Presentation:*

Day classes offered on Saturdays over a period of two years.

*f. Minimum duration:*

A minimum of one or two years (depending on the programme offering).

*g. Exclusion and readmission:*

See Chapter 2 of Students' Rules and Regulations.

*h. Re-registration:*

A student may re-register for the module Multimedia Project only with the permission of the Head of the Department. The purpose of the re-registration is to provide students with an opportunity to complete the project only, and not to redo it, should they fail the module.

*i. Personal equipment:*

Access to a laptop or desktop computer is essential to participate in multimodal learning experiences as well as to complete assignments and projects. NSFAS students receive an allowance to acquire a laptop, and using this allowance for this purpose is critical for academic success. Students are encouraged to consult the faculty website where the minimum requirements for specific programmes are published.



## CURRICULUM

### FIRST YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
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#### FIRST SEMESTER

GMD117V	Games Engineering	(7)	(15)	
HMD117V	Human Computer Interaction	(7)	(15)	
INP117V	Internet Programming	(7)	(15)	

#### SECOND SEMESTER

GPR117V	Advanced Games Programming	(7)	(15)	
IMD117V	Instructional Multimedia Design	(7)	(15)	
MPD117V	Multimedia Project Design	(7)	(15)	

TOTAL CREDITS FOR THE FIRST YEAR: **90**

### SECOND YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
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MCP107V	Multimedia Project	(7)	(15)	Multimedia Project Design
MCP117R	Multimedia Project (re-registration) (first-or second-semester module, see Paragraph h)	(7)	(0)	

#### FIRST SEMESTER

##### One of the following modules:

CGH117V	Computer Graphics	(7)	(15)	
ISE117V	Introduction to Software Engineering	(7)	(15)	

TOTAL CREDITS FOR THE SECOND YEAR: **30**

TOTAL CREDITS FOR THE QUALIFICATION: **120**

## MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. At time of publication, the syllabus content was defined as follows:

### A

**ADVANCED GAMES PROGRAMMING (GPR117V)** **1 X 4-HOUR COMPUTER-BASED**  
**(Module custodian: Department of Computer Science)**

This module prepares the student to provide an overview coverage of design, programming, and implementation of advanced 3D games on different platforms, including the mobile, web and computers platforms. (Total notional time: 150 hours)



**C****COMPUTER GRAPHICS (CGH117V)****1 X 4-HOUR COMPUTER-BASED***(Module custodian: Department of Computer Science)*

The main focus of this module is to introduce the student to the mathematics behind signal processing and its implementation to different platforms such as the web and mobile devices. (Total notional time: 150 hours)

**G****GAMES ENGINEERING (GMD117V)****1 X 4-HOUR COMPUTER-BASED***(Module custodian: Department of Computer Science)*

This module prepares the student to provide an overview coverage of advanced game design, programming, and implementation of 3D games on different platforms, including the mobile, web and computers platforms. (Total notional time: 150 hours)

**H****HUMAN COMPUTER INTERACTION (HMD117V)****1 X 4-HOUR COMPUTER-BASED***(Module custodian: Department of Computer Science)*

This module prepares and equip student with practical know-how that helps to address the basic tactical and strategic principles of designing systems that interacts with human beings and which human beings interact with interchangeably. (Total notional time: 150 hours)

**I****INSTRUCTIONAL MULTIMEDIA DESIGN (IMD117V)****PROJECT ASSESSMENT***(Module custodian: Department of Computer Science)*

This module equips students with the required skills to design effective multimedia for e-learning environments. This module includes instructional design principles, including cognitive load theory, cognitive theory of multimedia learning and instructional design principles for multimedia. (Total notional time: 150 hours)

**INTERNET PROGRAMMING (INP117V)****1 X 4-HOUR COMPUTER-BASED***(Module custodian: Department of Computer Science)*

The focus of this module is to lay the foundation for the design and implementation of internet applications using JEE components for a web container. Advanced programming concepts such as MVC design pattern, Servlets, Java Server Pages, Expression Language and Java Standard Tag Library (JSTL) are covered. (Total notional time: 150 hours)

**INTRODUCTION TO SOFTWARE ENGINEERING (ISE117V)****1 X 4-HOUR COMPUTER-BASED***(Module custodian: Department of Computer Science)*

The focus of this module is to teach students principles of software engineering with regard to systems analysis, design of software solutions within the context of industry-based problems. (Total notional time: 150 hours)

**M****MULTIMEDIA PROJECT (MCP107V, MCP117R)****PROJECT ASSESSMENT***(Module custodian: Department of Computer Science)*

This module prepares the student to apply the concepts and principles learned through the theoretical learning of all the modules in the qualification to provide solutions to a range of problems emanating from the multimedia IT industry. This module implements the design plan that was created in the Multimedia Project Design module. (Total notional time: 150 hours)

**MULTIMEDIA PROJECT DESIGN (MPD117V)****1 X 4-HOUR COMPUTER-BASED***(Module custodian: Department of Computer Science)*

This module prepares the student to make use of multimedia project design principles to provide solutions to a range of problems emanating from the IT industry. (Total notional time: 150 hours)

