BSc (Hons) Applied Computing (FT) - IC319

1. Introduction

As Information Technology (IT) continues to be the enabler of development and increasing integration into all aspects of the global economy, there is high need for skilled IT professionals who can easily use and apply IT to solve problems in different application domains.

The programme of study aims at producing graduates with practical knowledge and skills to develop, enhance and maintain computing applications by applying classic and leading edge computing concepts and technologies. The programme provides students with a solid grounding in areas such as programming, database systems, Internet technologies and use of IT in areas such as Health, Finance and Environment.

The programme is in line with international recommendations of computing curricula for Undergraduate Degree Programs in Applied Computing and designed in collaboration with the IT industry.

2. Objectives and Learning Outcomes

The programme has been designed to enable students to:

- identify common applied computing problems and to conduct application driven research work independently within academia or industry;
- apply theories, principles and concepts with technologies to creatively design, develop, and verify computational solutions;
- grow as mature professional and be able to take leadership roles with good knowledge of software development and applications in inter- and cross- disciplinary areas;
- be knowledgeable on leading edge computing concepts.

3. General Entry Requirements

As per General Entry Requirements for Admission to the University for Undergraduate Degrees.

4. Programme Requirements

At Least **2 GCE 'A' level Passes**, including either

(i) Mathematics

OR

(ii) Computing

5. Minimum Requirements for Awards

(i) Degree Award

For the degree award in BSc (Hons) Applied Computing, the student must obtain at least 105 credits including:

Modules	Credits
Minimum Credits for Core Modules (Departmental)	84
Minimum Credits for Elective Modules	12
Final Year Project	9
Industrial Training	0
TOTAL	105

(ii) Diploma Award

The Diploma is provided as a possible exit point in the programme. A student may opt for a Diploma in Applied Computing, by making a written request, provided he/she has obtained a minimum of 60 credits. A student wishing to exit at Diploma Level, may opt to complete a Diploma project (worth 6 credits) to attain the 60 credits. The assessment of the Diploma project will be based on project report, presentation and software/system demo.

6. Programme Duration

	Normal (Years)	Maximum (Years)
Degree:	3	5

7. Credits Per Year

Students may register for a maximum of 48 credits and a minimum of 6 credits, per year.

8. Classification of Awards

The award classification will be based on the CPA (x) at the end of the Programme of Studies as follows:

CPA (Cumulative Point Average)	Classification
≥ 70	1st Class with Honours
$60 \leq x < 70$	2nd Class 1st Division with Honours
$50 \leq x < 60$	2nd Class 2nd Division with Honours
$45 \leq x < 50$	3rd Class with Honours
$40 \leq x < 45$	Pass
< 40	No Award

9. Pre-Requisite Modules (PR)

A student will be allowed to follow module *y* of which module *x* is a pre-requisite (PR) provided he/she has **satisfactorily completed module *x* with at least a pass grade**.

10. Assessment and Pass Requirements

The assessment mode for each module will be based on one or a combination of the following:

- Examination
- Continuous Assessment (class tests, assignments, practicals, and oral presentations)
- Report Assessment (Final Year Project)
- Software Evaluation (Demo of Final Year Project)
- Portfolio Evaluation (Industrial Training)

An overall total of at least 40% for combined continuous assessment and written examination components would be required to pass the module.

Calculation of the final mark: The continuous assessment must account for no less than 30% and for no more than 50% of final mark, with the exception of modules like Final Year and Diploma Project. The specific details and/or formula for the calculation of the final mark are given in the Module Specification Sheet (MSS) for each module. Students have to retake both continuous assessment and exams in the failed modules.

If CPA of a student is less than 40%, the latter will have to repeat the entire academic year, and retake the modules as and when offered. However, students will not be required, if they wish, to retake modules for which Grade C or above has been obtained. Students are allowed to repeat (a year) only once over the entire duration of the Programme of Studies.

Industrial Training will be assessed as either "Satisfactory" or "Unsatisfactory".

11. Duration of Examinations

The written examination will be of 3 hours' duration for yearly modules carrying 6 credits.

12. Termination of Registration

Termination of registration will occur in the following circumstances:

- If the student's CPA remains below 40 at the end of an academic year and the student has already repeated one year of study, unless decided otherwise by Senate.
- If the student does not successfully complete all the modules prescribed for the programme in a total of 5 years.

13. List of Modules – BSc (Hons) Applied Computing

CORE MODULES

Module Code	Module Name	Hrs/Wk L+P	Credits
ICDT 1016Y(1)	Communication and Business Skills for IT	3+0	6
DGT 1031Y(1)	Database Systems and Administration	2+2	6
DGT 1032Y(1)	Web Design and Development	2+2	6
DGT 1033Y(1)	Business Computing	3+0	6
DGT 1034Y(1)	Mathematics for Computing	3+0	6
DGT 1038Y(1)	Programming and Data Structures	2+2	6
ICDT 1200	Practical Training	-	0
SIS 2025Y(3)	Enterprise Systems	2+2	6
DGT 2029Y(3)	Multimedia Authoring and Development	2+2	6
DGT 2030Y(3)	Networking Principles	2+2	6
DGT 2034Y(3)	Internet Technologies and Web Services	2+2	6
DGT 2035Y(3)	Software Modelling and Design	2+2	6
DGT 2036Y(3)	Principles of Software Development	3+0	6
ICDT 2200	Industrial Training	10 weeks	0
DGT 3000Y(5)	Final Year Project	-	9
DGT 3122Y(5)	Distributed and Cloud Computing	2+2	6
DGT 3123Y(5)	Mobile Computing and Wireless Technologies	2+2	6

ELECTIVE MODULES

DGT 3098Y(5)	Applied Cybersecurity	2+2	6
DGT 3099Y(5)	Sensor Systems and Applications	2+2	6
DGT 3113Y(5)	Computing for Life Sciences	2+2	6
DGT 3120Y(5)	Graphics Design and Image Processing Applications	2+2	6

14. Programme Plan

Year 1 - Semester 1 and 2				
Module Code CORE	**Module Name**	**UoM Credits**	**Hrs/Week L+P**	**PR**
ICDT 1016Y(1)	Communication and Business Skills for IT	6	3+0	
DGT 1031Y(1)	Database Systems and Administration	6	2+2	
DGT 1032Y(1)	Web Design and Development	6	2+2	
DGT 1033Y(1)	Business Computing	6	3+0	
DGT 1034Y(1)	Mathematics for Computing	6	3+0	
DGT 1038Y(1)	Programming and Data Structures	6	2+2	
ICDT 1200	*Practical Training*	0	-	
	Total	**36**		
Year 2 - Semester 1 and 2				
Module Code CORE	**Module Name**	**UoM Credits**	**Hrs/Week L+P**	**PR**
SIS 2025Y(3)	Enterprise Systems	6	2+2	
DGT 2029Y(3)	Multimedia Authoring and Development	6	2+2	
DGT 2030Y(3)	Networking Principles	6	2+2	
DGT 2034Y(3)	Internet Technologies and Web Services	6	2+2	
DGT 2035Y(3)	Software Modelling and Design	6	2+2	
DGT 2036Y(3)	Principles of Software Development	6	3+0	
ICDT 2200	*Industrial Training*	0	*10 weeks*	
	Total	**36**		
Year 3 - Semester 1 and 2				
Module Code CORE	**Module Name**	**UoM Credits**	**Hrs/Week L+P**	**PR**
DGT 3000Y(5)	Final Year Project	9	-	
DGT 3122Y(5)	Distributed and Cloud Computing	6	2+2	
DGT 3123Y(5)	Mobile Computing and Wireless Technologies	6	2+2	
ELECTIVES	**Choose TWO (2) modules from:**			
DGT 3098Y(5)	Applied Cybersecurity	6	2+2	
DGT 3099Y(5)	Sensor Systems and Applications	6	2+2	
DGT 3113Y(5)	Computing for Life Sciences	6	2+2	
DGT 3120Y(5)	Graphics Design and Image Processing Applications	6	2+2	DGT 2029Y(3)
	Total	**33**		

Note:

(i) The University reserves the right not to offer a given elective module if the critical number of students is not attained and/or for reasons of resource constraints.

(ii) ICDT 1200 Practical Training duration is 30 hours.