BSc (Hons) Chemistry (Accredited by the Royal Society of Chemistry) SC310

1. Mission, Aims and Objectives

Chemistry is considered as the "central" science because it interconnects many other sciences. Chemistry seeks to understand the nature of matter in terms of atoms and molecules and the changes it undergoes.

The mission of the Department of Chemistry is to provide students with the appropriate level of modern and comprehensive chemical education required for life and work in our technologically advanced society. The Department offers a three year full time BSc (Hons) Chemistry programme, suitable for a wide range of career goals, both industrial and academic.

The modules offered at undergraduate level emphasise the fundamental principles of chemistry while developing experimental skills. The aims are to train students in developing their critical thinking and problem-solving skills and to enable them to tackle problems in the real world using their chemical knowledge. In an attempt to bring more applied knowledge to this programme, the Department of Chemistry offers a number of electives in polymer chemistry, environmental chemistry, computational chemistry, industrial chemistry, quality control and forensic science.

The Department encourages a variety of research interests in a broad spectrum of the chemical field addressing both pure and applied chemistry aiming at advancing the frontiers of knowledge and solving issues of national importance. It offers MPhil/PhD programmes in these areas and also encourages student involvement in research projects.

2. General Entry Requirements for Admission to the University

As per General Entry Requirements for admission to the University for undergraduate degrees.

3. Programme Requirements

Credit at GCE ‘O’ level in Mathematics or equivalent.
Pass at GCE 'A' Level in Chemistry.

4. Programme Duration

	Normal	**Maximum**
BSc (Hons) Chemistry	6 Semesters	10 Semesters

5. Credit System

15 Hours Lectures and/or Tutorials - 1 Credit.
15 Hours of Practical Work – 0.5 Credit.

6. Credits per Year

Minimum 18 credits; Maximum (including retake modules): 48 credits.

7. Minimum Credits Required for Award

BSc (Hons) Chemistry: 105

Breakdown as follows:

	Credits from		
Degree	**Core Taught Modules**	**Project**	**Electives[a]**
BSc (Hons) Chemistry	78	9	18

[a] For BSc (Hons) Chemistry: 18 credits from electives offered by the Department of Chemistry with 9 credits (three electives) from year 2 and 9 credits (three electives) from year 3.

8. Assessment

Each module will carry 100 marks (i.e. expressed as %) and will be assessed as follows (unless otherwise specified):

Assessment will be based on a written examination of 3-hour duration for 5/6 credit modules and 2-h for 3 credit modules and on continuous assessment carrying 30% of total marks, except for a programme where the structure makes for other specific provision(s). Continuous assessment may be based on laboratory work, and/or assignments and should include at least 1 class test for 3 credit modules and 2 class tests for 5/6 credit modules.
An overall total of 40% for combined continuous assessment and written examination components would be required to pass a module, without minimum thresholds within the individual continuous assessment and written examination.
WCS 2200(3) will be 100 % coursework based on assignments and presentations.
The core module namely ILT1010e(1) as well as the elective modules namely CHEM 2065Y(3) and CHEM 2070Y(3) will be taught and examined in the first semester.

CHEM 1051Y(1) and CHEM 2051Y(3) will be assessed solely by continuous assessment.

Modules will carry the weightings of 1, 3 or 5 depending on their status (Introductory, Intermediate or Advanced). Weighting for a particular module is indicated within parentheses in the module code.

9. List of Modules

A. CHEMISTRY CORE MODULES (87 credits)

Code	Module Name	Hrs L+P	Credits
CHEM 1011Y(1)	Organic Chemistry I	75+0	5
CHEM 1021Y(1)	Physical Chemistry I	75+0	5
CHEM 1031Y(1)	Inorganic Chemistry I	75+0	5
CHEM 1041Y(1)	Analytical & Environmental Chemistry I	75+0	5
CHEM 1051Y(1)	Practical Chemistry I	0+150	5
CHEM 1061Y(1)	Maths for Chemists	45+0	3
ILT 1010e(1)	Digital Literacy	O.E.*	3
CHEM 2011Y(3)	Organic Chemistry II	90+0	6
CHEM 2021Y(3)	Physical Chemistry II and Polymer Chemistry I	90+0	6
CHEM 2031Y(3)	Inorganic Chemistry II	90+0	6
CHEM 2041Y(3)	Analytical Chemistry II	45+0	3
CHEM 2051Y(3)	Practical Chemistry II	0+150	5
WCS 2200(3)	Writing Case Studies	9+0**	3
CHEM 3000(5)	Project	-	9
CHEM 3011Y(5)	Organic Chemistry III	90+0	6
CHEM 3021Y(5)	Physical Chemistry III	90+0	6
CHEM 3031Y(5)	Inorganic Chemistry III	90+0	6

**O.E – online education*
** 9 Hours of Lectures and 36 Hours Self Study

B. DEPARTMENTAL ELECTIVES (Not all modules may be on offer)

CHEM 2064Y(3)	Topics in Biochemistry	37.5+15	3
CHEM 2065Y(3)	Industrial Chemistry	37.5+15	3
CHEM 2066Y(3)	Computational Chemistry	37.5+15	3
CHEM 2067Y(3)	Environmental Chemistry II	30+30	3
CHEM 2070Y(3)	Forensic Chemistry I	37.5+15	3
CHEM 3064Y(5)	Polymer Chemistry II	40+10	3
CHEM 3065Y(5)	Selected Topics in Environmental and Analytical Chemistry	40+10	3
CHEM 3066Y(5)	Quality Control and Quality Management	40+10	3
CHEM 3067Y(5)	Supramolecular Chemistry	45+0	3
CHEM 3070Y(5)	Forensic Chemistry II	40+10	3

10. Programme Plan – BSc (Hons) Chemistry (Accredited by the Royal Society of Chemistry)

YEAR 1

Code	Module Name	Hrs L+P	Credits
CORE			
CHEM 1011Y(1)	Organic Chemistry I	75+0	5
CHEM 1021Y(1)	Physical Chemistry I	75+0	5
CHEM 1031Y(1)	Inorganic Chemistry I	75+0	5
CHEM 1041Y(1)	Analytical & Environmental Chemistry I	75+0	5
CHEM 1051Y(1)	Practical Chemistry I	0+150	5
CHEM 1061Y(1)	Maths for Chemists	45+0	3
ILT1010e(1)	Digital Literacy	O.E*	3

*O.E –lectures and online study

YEAR 2

Code	Module Name	Hrs L+P	Credits
CORE			
CHEM 2011Y(3)	Organic Chemistry II	90+0	6
CHEM 2021Y(3)	Physical Chemistry II and Polymer Chemistry I	90+0	6
CHEM 2031Y(3)	Inorganic Chemistry II	90+0	6
CHEM 2041Y(3)	Analytical Chemistry II	45+0	3
CHEM 2051Y(3)	Practical Chemistry II	0+150	5
WCS 2200(3)	Writing Case Studies	9+0**	3
ELECTIVES			
CHEM 2064Y(3)	Topics in Biochemistry	37.5+15	3
CHEM 2065Y(3)	Industrial Chemistry	37.5+15	3
CHEM 2066Y(3)	Computational Chemistry	37.5+15	3
CHEM 2067Y(3)	Environmental Chemistry II	30+30	3
CHEM 2070Y(3)	Forensic Chemistry 1	37.5+15	3

** 9 Hours of Lectures and 36 Hours Self Study

YEAR 3

Code	Module Name	Hrs L+P	Credits
CORE			
CHEM 3000Y(5)	Project	-	9
CHEM 3011Y(5)	Organic Chemistry III	90+0	6
CHEM 3021Y(5)	Physical Chemistry III	90+0	6
CHEM 3031Y(5)	Inorganic Chemistry III	90+0	6
ELECTIVES			
CHEM 3064Y(5)	Polymer Chemistry II	40+10	3
CHEM 3065Y(5)	Selected Topics in Environmental and Analytical Chemistry	40+10	3
CHEM 3066Y(5)	Quality Control and Quality Management	40+10	3
CHEM 3067Y(5)	Supramolecular Chemistry	45+0	3
CHEM 3070Y(5)	Forensic Chemistry II	40+10	3

NOTE: NOT ALL ELECTIVES MAY BE ON OFFER