FACULTY OF SCIENCE

DEPARTMENT OF PURE AND APPLIED CHEMISTRY

APPLIED CHEMISTRY AND CHEMICAL ENGINEERING

Master of Science in Applied Chemistry and Chemical Engineering

These regulations are to be read in conjunction with General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

Status of the Programme

1. The programme is at Integrated Masters level. Transfer to the BSc with Honours in Applied Chemistry or the BSc in Chemistry is possible at any time subject to satisfying the appropriate programme regulations.

Curriculum

2. All students shall undertake an approved curriculum as follows:

First Year

All students shall undertake modules amounting to 130 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
CH106	Chemistry: Principles and Practice 1	1	20
CH107	Chemistry: Principles and Practice 2	1	20
CP101	Basic Principles in Chemical Engineering	1	20
CP102	Chemical Engineering: Fundamentals, Techniques and Tools	1	20
MM111	Mathematics 1B	1	20
MM112	Mathematics 2B	1	20
	Elective Module		10

Second Year

All students shall undertake modules amounting to 130 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
CH208	Fundamental Organic Chemistry	2	20

CH212	Physical Chemistry I	2	20
CH218	Practical Organic, Inorganic and Physical Chemistry and Safety	2	20
CP204	Fluid Flow and Heat Transfer	2	20
CP207	Process Analysis and Statistics	2	20
MM211	Mathematics 3B	2	20
	Elective Module		10

Third Year

All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
CH306	Practical Preparative and Physical Chemistry	3	20
CH324	Inorganic Chemistry	3	20
CH325	Intermediate Organic Chemistry and Spectroscopy	3	20
CP302	Mass Transfer and Separation Processes	3	20
CP316	Reactors	3	10
CP326	Chemical Engineering Practice 2 (ACCE)	3	10
CP327	Chemical Process Design and Simulation	3	20

Fourth Year

All students shall undertake modules amounting to 120 credits as follows:

Compulsory Modules

Module Code	Module Title	Level	Credits
CH460	Physical Chemistry 2	4	20
CH461	Inorganic Chemistry, Structures and Spectroscopy	4	20
CP405	Process Control and Environmental Technology	4	20
CP407	Chemical Engineering Design (MSci)	4	60

Fifth Year

All students shall undertake modules amounting to 120 credits as follows:

Compulsory Module

Module Code	Module Title	Level	Credits
CH587	MSci in Applied Chemistry and Chemical Engineering*	5	120

CH545 MSci in Applied Chemistry and Chemical Engineering comprises of the following compulsory and optional module choices.

Compulsory Modules

Module Code	Module Title	Level	Credits
CH593	MSci Project, Dissertation and Presentation	5	60
CH590	MSci Chemistry Topics	5	20

Optional Modules

All students shall choose optional modules to a total of 40 credits from:

Module Code	Module Title	Level	Credits
CP523	Molecular Simulation in Chemical Engineering	5	10
CP527	Petrochemical Engineering	5	10
CP530	Safety Management Practices	5	10
CP533	Clean Combustion Technologies	5	10
CP535	Molecular and Interfacial Science	5	10
CP537	Electrochemical Energy Devices	5	10

Other modules as may be approved by the Programme Director. Not all optional modules in this list will be available every academic year.

Curriculum (Part-time study)

3. Students studying on a part-time basis will normally take modules amounting to 60 credits in each year.

Progress

4. In order to progress to the second year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

5. In order to progress to the third year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

6. In order to progress to the fourth year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

7. In order to progress to the fifth year of the programme, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

Final Assessment and Classification

8. On successful completion of the fifth year, a candidate will be awarded 120 Level 5 credits under the module code CH545.

9. The final classification for the degree of MSci in Applied Chemistry and Chemical Engineering will normally be based on the first assessed attempt at compulsory and specified optional modules which are taken in the third, fourth and fifth years.

Award

10. **MSci**: In order to qualify for the award of the degree of MSci in Applied Chemistry and Chemical Engineering, see General Academic Regulations – Undergraduate, Integrated Master and Professional Graduate Degree Programme Level.

Transfer

11. A candidate who fails to satisfy the progress or award requirements for the degree may be transferred to the degree of BSc with Honours in Applied Chemistry or the BSc in Chemistry.