



APPROVED

Awards	
Honours Bachelor Degree	
Mode of Delivery:	Full Time
No. of Semesters :	8
NFQ Level:	8
Programme Credits:	240
Language of Instruction:	English
Department:	Science and Health

Semester Schedules

Stage 1 / Semester 1

Elective Regulation

1. Students must achieve a minimum grade (35%) in both the practical/CA and Final Examination in the following modules: Fundamental Biology, Chemistry 1, Physics 1. 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Quantitative Methods 1

Mandatory	
Module Code	Module Title
ZBIO C1101	Fundamental Biology
ZCHE C1101	Chemistry 1
ZLAB C1101	Laboratory Science
ZPHY C1101	Physics 1
ZMTS C1101	Quantitative Methods 1

Stage 1 / Semester 2

Elective Regulation

1. Students must achieve a minimum grade (35%) in both the practical/CA and Final Examination in the following modules: Chemistry 2, Quantitative Methods 2, Animal and Human Biology. 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Physics 2 3. Current concepts in Science is an elective. Brewing and Distilling students will do a comparable module (Introduction to Brewing Studies) and Science Students will do Science module(Introduction to BioScience)

Mandatory	
Module Code	Module Title
ZBIO C1102	Animal and Human Biology
ZCHE C1102	Chemistry 2
ZPHY C1102	Physics 2
ZMTS C1102	Quantitative Methods 2
ZSCI C1101	Current Concepts in Science

Stage 2 / Semester 1

Elective Regulation

1. Students must achieve a minimum grade (35%) in both the practical/CA and Final Examination in the following modules: Instrumentation, Analytical Inorganic Chemistry, 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Quantitative Methods and Quality Control, Organic and Physical Chemistry

Mandatory	
Module Code	Module Title
ZINS C2101	Instrumentation
ZQUA C2101	Quantitative Methods and Quality Control 1
ZANA C2101	Analytical Inorganic Chemistry 1
ZCHE C2103	Organic and Physical Chemistry 1

Stage 2 / Semester 2

Elective Regulation

1. Students must achieve a minimum grade (35%) in both the practical/CA and Final Examination in the following modules: Organic and Physical Chemistry 2 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Quantitative Methods and Quality Control 2, Analytical Inorganic Chemistry 2, Pharmaceutical Science 3. Students must achieve a minimum grade (35%) in both the CA and Final Examination in the following modules: Biomolecules 4. Students may apply to EXIT from the programme with a Higher Certificate in Science in Applied Chemistry (Embedded Exit Award), provided they have achieved the required learning outcomes for the level 6 award and have accumulated 120 credits. IT Carlow academic regulations apply.

Mandatory	
Module Code	Module Title
ZQUA C2102	Quantitative Methods and Quality Control 2
ZANA C2102	Analytical Inorganic Chemistry 2
ZCHE C2104	Organic and Physical Chemistry 2
ZCHE C2105	Biomolecules
ZPHA C2102	Pharmaceutical Science

Stage 2 Exit Only Award : Higher Certificate

Stage 3 / Semester 1

Elective Regulation

1. Students must achieve a minimum grade (35%) in the Practical/CA and Final Examination in the following modules: Physical Chemistry, Spectrochemical Methods, Quality Management, Experimental Design and Data Analysis. 2. Students must achieve a minimum grade (35%) in the CA and Practical in the following modules: Sampling and Separation Science

Mandatory	
Module Code	Module Title
ZCHE C3103	Physical Chemistry
ZCHE C3104	Spectrochemical Methods
ZSCI C3100	Sampling and Separation Science 1
ZQUA C3103	Quality Management, Experimental Design and Data Analysis

Stage 3 / Semester 2

Elective Regulation

1. Analytical Project and Workplace planning is delivered as a year-long module with credits awarded at the end of Semester 6 2. Students must achieve a minimum grade (35%) in the Practical/CA and Final Examination in the following modules: Sampling and Separation Science 2, Microbiology for Pharmaceutics, Pharmaceutical Processing and Process Analytical Technologies. 3. Students must achieve a minimum grade (35%) in the CA and Practical in the following modules: Environmental Science 4. Students must achieve a minimum grade (35%) in the CA and Project in the following modules: Analytical Project and Workplace Planning. 5. Students may apply to EXIT from the programme with a Bachelor of Science in Analytical Science (Embedded Exit Award), provided they have achieved the required learning outcomes for the level 7 award and have accumulated 180 credits. IT Carlow academic regulations apply.

Mandatory	
Module Code	Module Title
ZENV C3100	Environmental Science
ZSCI C3101	Sampling and Separation Science 2
ZPHA C3108	Microbiology for Pharmaceutics
ZANA C3100	Analytical Project and Workplace Planning
ZPHA C3100	Pharmaceutical Processing and Process Analytical Technologies

Stage 3 Exit Only Award : Ordinary Bachelor Degree

Stage 4 / Semester 1

Elective Regulation

1. Students must achieve a minimum grade (35%) in the Practical/CA and Final Examination in the following modules: Assay Development, Pharmaceutical Formulation, Drug Stability

Mandatory	
Module Code	Module Title
ZSCI C4105	Assay Development
ZPHA C4104	Pharmaceutical Formulation
ZPHA C4105	Drug Stability

Stage 4 / Semester 2

Elective Regulation

1. Research Project in Pharmaceutics is delivered as a year-long module with credits awarded at the end of Semester 8 2. Students must achieve a minimum grade (35%) in the CA and Final Examination in the following modules: Regulatory Affairs for Pharmaceutics 3. Students must achieve a minimum grade (35%) in the CA/Practical and Final examination in the following module: Advanced Data Analysis and Modelling

Mandatory	
Module Code	Module Title
ZDAT C4100	Advanced Data Analysis and Modelling
ZPRO C4101	Research Project in Pharmaceutics
ZWKP C4103	Work Placement Pharmaceutics
ZLAW C4100	Regulatory Affairs for Pharmaceutics

Stage 4 Exit Only Award : Honours Bachelor Degree