



APPROVED

Awards	
Honours Bachelor Degree	
Mode of Delivery:	Full Time
No. of Semesters :	8
NFQ Level:	8
Programme Credits:	5
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
ZCHE C1102	Chemistry 2
ZPHY C1102	Physics 2
ZMTS C1102	Quantitative Methods 2
ZBIO C1102	Animal and Human Biology
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, Molecular Biology 1, Biochemistry- Biomolecules. 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Quantitative Methods and Quality Control, Fundamentals of Microbiology 1.

Mandatory	
Module Code	Module Title
ZINS C2101	Instrumentation
ZQUA C2101	Quantitative Methods and Quality Control 1
ZBIO C2101	Fundamentals of Microbiology 1
ZBIO C2102	Molecular Biology 1
ZCHE C2101	Biochemistry Biomolecules

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: Fundamentals of Microbiology 2, Molecular Biology 2, Biochemistry Metabolism. 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Analytical Techniques Pharmaceutical Science, Quantitative Methods and Quality Control 2. 3. Students may apply to EXIT from the programme with a Higher Certificate in Science in Applied Biology (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
ZPHA C2101	Analytical Techniques Pharmaceutical Science
ZQUA C2102	Quantitative Methods and Quality Control 2
ZBIO C2103	Fundamentals of Microbiology 2
ZBIO C2104	Molecular Biology 2
ZCHE C2102	Biochemistry Metabolism

Stage 3 / Semester 1

Elective Regulation

1. Students must achieve a minimum grade (35%) in both the practical/CA and Final Examination in the following modules: Food Microbiology, Quality management, Experimental Design and Data Analysis, Manufacturing 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Molecular Biology and Immunology 1 3. Students must achieve a minimum grade (35%) in the CA/project and practical in the following modules: Biochemistry 1

Mandatory	
Module Code	Module Title
ZCHE C3100	Food Microbiology
ZCHE C3101	Biochemistry 1
ZBIO C3100	Molecular Biology and Immunology 1
ZQUA C3103	Quality Management, Experimental Design and Data Analysis
ZMAN C3100	Manufacturing

Stage 3 / Semester 2

Elective Regulation

Bioscience Project and Workplace Planning is delivered year-long with the credits awarded at the end of Semester 6 1. Students must achieve a minimum grade (35%) in both the practical/CA and Final Examination in the following modules: Microbial Cell Factory, Biochemistry 2 2. Students must achieve a minimum grade (35%) in both the practical and Final Examination in the following modules: Molecular Biology and Immunology. 3. Students must achieve a minimum grade (35%) in both the practical and Continuous Assessment in the following modules: Spectroscopy for Biosciences 4. Students may apply to EXIT from the programme with a Bachelor of Science in Biosciences, 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
ZBIO C3102	Spectroscopy for Biosciences
ZBIO C3103	Microbial Cell Factory
ZCHE C3102	Biochemistry 2
ZBIO C3104	Molecular Biology and Immunology 2
ZPRO C3100	Bioscience Project and Workplace Planning

Stage 4 / Semester 1

Elective Regulation

1. Students must achieve a minimum grade (35%) in both the practical/CA and Final Examination in the following modules: Environmental Health and Safety, Pharmaceutical Science 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Molecular Genetics and Immunology 1 3. Students must achieve a minimum grade (35%) in the final examination in the following modules: Industrial Bioprocessing.

Mandatory	
Module Code	Module Title
ZMGT H4101	Environmental Health and Safety
ZSCI H4102	Pharmaceutical Science
ZSCI H4101	Molecular Genetics and Immunology 1
ENVI	Industrial Bioprocessing

Stage 4 / Semester 2

Elective Regulation

Research Project in Bioscience/Biopharmaceuticals is delivered year-long with the credits awarded at the end of Semester 8 1. Students must achieve a minimum grade (35%) in both the practical and Final Examination in the following modules: Molecular Genetics and Immunology 2. 2. Students must achieve a minimum grade (35%) in both the CA/project and Final examination in the following modules: Bioforensics.

Mandatory	
Module Code	Module Title
ZSCI H4101	Molecular Genetics and Immunology 2
TECH	Current Trends in Biopharmaceutical Technology
ZSCI H4103	Bioforensics
ZPRO H4101	Research Project in Bioscience/Biopharmaceuticals
ZWKP H4101	Work Placement Bioscience/Biopharmaceuticals