



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	<a href="#">Fundamental Biology</a>
ZCHE C1101	<a href="#">Chemistry 1</a>
ZLAB C1101	<a href="#">Laboratory Science</a>
ZPHY C1101	<a href="#">Physics 1</a>
ZMTS C1101	<a href="#">Quantitative Methods 1</a>

## 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	<a href="#">Chemistry 2</a>
ZPHY C1102	<a href="#">Physics 2</a>
ZMTS C1102	<a href="#">Quantitative Methods 2</a>
ZBIO C1102	<a href="#">Animal and Human Biology</a>
ZSCI C1101	<a href="#">Current Concepts in Science</a>

## 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	<a href="#">Instrumentation</a>
ZQUA C2101	<a href="#">Quantitative Methods and Quality Control 1</a>
ZBIO C2101	<a href="#">Fundamentals of Microbiology 1</a>
ZBIO C2102	<a href="#">Molecular Biology 1</a>
ZCHE C2101	<a href="#">Biochemistry Biomolecules</a>

## 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	<a href="#">Analytical Techniques Pharmaceutical Science</a>
ZQUA C2102	<a href="#">Quantitative Methods and Quality Control 2</a>
ZBIO C2103	<a href="#">Fundamentals of Microbiology 2</a>
ZBIO C2104	<a href="#">Molecular Biology 2</a>
ZCHE C2102	<a href="#">Biochemistry Metabolism</a>

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	<a href="#">Food Microbiology</a>
ZCHE C3101	<a href="#">Biochemistry 1</a>
ZBIO C3100	<a href="#">Molecular Biology and Immunology 1</a>
ZQUA C3103	<a href="#">Quality Management, Experimental Design and Data Analysis</a>
ZMAN C3100	<a href="#">Manufacturing</a>

## 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	<a href="#">Spectroscopy for Biosciences</a>
ZBIO C3103	<a href="#">Microbial Cell Factory</a>
ZCHE C3102	<a href="#">Biochemistry 2</a>
ZBIO C3104	<a href="#">Molecular Biology and Immunology 2</a>
ZPRO C3100	<a href="#">Bioscience Project and Workplace Planning</a>

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	<a href="#">Environmental Health and Safety</a>
ZSCI H4102	<a href="#">Pharmaceutical Science</a>
ZSCI H4101	<a href="#">Molecular Genetics and Immunology 1</a>
ENVI	<a href="#">Industrial Bioprocessing</a>

## 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	<a href="#">Molecular Genetics and Immunology 2</a>
TECH	<a href="#">Current Trends in Biopharmaceutical Technology</a>
ZSCI H4103	<a href="#">Bioforensics</a>
ZPRO H4101	<a href="#">Research Project in Bioscience/Biopharmaceuticals</a>
ZWKP H4101	<a href="#">Work Placement Bioscience/Biopharmaceuticals</a>