



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 Brewing and Distilling 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: Biochemistry- Biomolecules, Analytical Techniques for Brewing and Distilling, Mechanical and Electrical Technology in Brewing and Distilling. 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
ZCHE C2101	Biochemistry Biomolecules
ZBIO C2101	Fundamentals of Microbiology 1
ZQUA C2101	Quantitative Methods and Quality Control 1
ZANA C2103	Analytical Techniques for Brewing and Distilling
ZBRE C2101	Mechanical and Electrical Technology in Brewing and Distilling

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, Biochemistry Metabolism, Analytical Chromatographic Techniques for Brewing and Distilling 2. Students must achieve a minimum grade (35%) in both the practical and CA in the following modules: Quantitative Methods and Quality Control 2. 3. Students must achieve a minimum grade (35%) in the CA and project and practical in the following modules: Malt, Water, Hops and Yeast - Brewing and Distilling Raw Materials. 4. Students may apply to EXIT from the programme with a Higher Certificate in Science in Brewing Science (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
ZCHE C2102	Biochemistry Metabolism
ZBIO C2103	Fundamentals of Microbiology 2
ZQUA C2102	Quantitative Methods and Quality Control 2
ZBRE C2102	Malt, Water, Hops and Yeast – Brewing and Distilling Raw Materials
ZANA C2104	Analytical Chromatographic Techniques for Brewing and Distilling

Stage 3 / Semester 1

Elective Regulation

1. Learners must achieve a minimum grade (35%) in the practical of the following modules: Research Methods for Brewing and Distilling 2. Learners must achieve a minimum grade (35%) in the CA/Practical and Final Examination of the following modules: The Brewing Process 3. Learners must achieve a minimum grade (35%) in the CA and Final Examination of the following modules: Environmental Management.

Mandatory	
Module Code	Module Title
ZRCH C3103	Research Methods for Brewing and Distilling
BREW H3R02	The Brewing Process
ZENV C3102	Environmental Management
ZBRE C3102	Brewery and Distillery Engineering

Stage 3 / Semester 2

Elective Regulation

Students may apply to EXIT from the programme with a Bachelor of Science in Brewing 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
ZWKP C3102	Work Placement Brewing and Distilling

Stage 4 / Semester 1

Elective Regulation

1. Students are required to achieve a minimum grade (35%) in the CA/practical and Final Examination in the following modules: Distillation and Distilled Spirits Production 2. Students are required to achieve a minimum grade (35%) in the CA/Project and Final Examination in the following modules: Quality Management for Brewers and Distillers

Mandatory	
Module Code	Module Title
BREW H4R02	Distillation and Distilled Spirits Production
BUSS H4101	Management in the Brewing and Distilling Industry
ZQUA H4101	Quality Management for Brewers and Distillers
ZLAW H4101	Law for Brewing and Distilling 1

Stage 4 / Semester 2

Elective Regulation

1. Research Project in Brewing and Distilling is delivered year-long with the credits awarded at the end of Semester 8 2. Learners must achieve a minimum grade (35%) in the CA and Final Examination in the following modules: Beverage Packaging 3. Learners must achieve a minimum grade (35%) in the Practical/CA and Final Examination in the following modules: Food Fermentation 4. Learners must achieve a minimum grade (35%) in the Practical and CA of the following modules: Post-distillation Downstream Processing

Mandatory	
Module Code	Module Title
MANU	Beverage Packaging
ZBRE H4103	Food Fermentation
BREW H4R01	Post-distillation Downstream Processing
ZBUS H4101	Marketing and New Product Innovation
ZLAW H4101	Law for Brewing and Distilling 2
ZPRO H4103	Research Project in Brewing and Distilling