PROGRAMME DETAILS
Programme Code: B947-BRD
Department: Bioscience
Main Award: MSC - Master of Science
Full Award Title: Master of Science in Brewing and Distilling
Level: Postgraduate Taught

LOCATION OF STUDY
Edinburgh N Scottish Borders Y Orkney N
Dubai Y Malaysia N Approved Learning Partner N
Independent Distance Learners Y Collaborative Learning Partner N Other N

ASSOCIATED AWARDS
Programme Code Award Title
B940-ZZZ PGCERT Postgraduate Certificate in Brewing and Distilling
B945-BRD PGDIP Postgraduate Diploma in Brewing and Distilling
B947-BRD MSC Master of Science in Brewing and Distilling

ACCREDITATION
The Institute of Brewing and Distilling (IBD) offer graduates the opportunity for exemption from the Diploma in Brewing, or Diploma in Distilling should they, later in their career, wish to undertake the IBD Master Brewer or Master Distiller qualification through the IBD.

LEARNING OUTCOMES – SUBJECT MASTERY
Understanding, Knowledge and Cognitive Skills

The Programme aims to enable learners to:

- Develop detailed knowledge and understanding of the fundamental subjects and topics which are essential in gaining the broad spectrum of expertise required for malting, brewing and distilling: cereal science and technology, yeast science, microbiology, biochemistry, process technology, business strategies, management, food safety, practical and project skills (malting, brewing and distilling), quality control and quality assurance, flavour assessment, analytical chemistry.
- Develop a sound understanding and knowledge of policy, legislation, ethical, health and safety issues of concern as they relate to the design, manufacture, marketing and sale of alcoholic drinks and for the raw materials, processing aids, by-products and wastes of the industry.
- Develop specialist knowledge of the malting, brewing, fermentation, processing, distillation, maturation, packaging and distribution process stages in the production of alcoholic drinks.
- Develop knowledge and understanding of the methods and research skills for investigating new and existing problem areas in malting, brewing and distilling, so that the ability is acquired to conduct independent research and to solve problems.
- Develop knowledge and understanding of the business environment pertaining to malting, brewery and distillery companies including the main areas of strategic planning, operations management, organisational structure, human resources management, marketing, finance, intellectual property and due diligence.
- Critically analyse and evaluate subject material and concepts.

Scholarship, Enquiry and Research (Research Informed Learning)

The Programme aims to enable learners to:-
B947-BRD Master of Science in Brewing and Distilling

- Comprehend, analyse and critically evaluate theory, research findings, process applications.
- Diagnose attributes and defects in alcoholic drinks.
- Recognise, evaluate and comment on alternative theories, opinions and points of view.
- Explore alternative theories and hypotheses.
- Understand and use data and information effectively.
- Apply and interpret statistical and numerical information.

LEARNING OUTCOMES – PERSONAL ABILITIES

Industrial, Commercial and Professional Practice

- Carry out a detailed literature survey and be competent and expert at collecting, organising and presenting information from www, library, journals, books.
- Make critical judgement and evaluations.
- Perform efficiently the process operations of malting, brewing and distilling at the pilot scale, including the planning of recipes, quantities, process parameters.
- The programme has very close links with industry, networking during industrial visits and following talks by visiting lecturers is a key component of the course.

Autonomy, Accountability and Working With Others

- Take responsibility for their learning and become more independent as learners.
- Work effectively alone and as part of a team.

Communication, Numeracy & Information and Communications Technology

- Manage data and information efficiently and effectively.
- Use a range of techniques for work presentation: written, word processed, spreadsheets, presentation packages

APPROACHES TO TEACHING AND LEARNING

A wide range of approaches are used for teaching and learning, these include lectures, tutorials, laboratories and assignments such as essays, problems, case studies, projects and presentations. Examinations provide an opportunity for students to demonstrate that they have grasped a wide range of key concepts and can articulate them clearly.

EDUCATIONAL AIMS OF THE PROGRAMME

The Programme aims to enable learners to:-

- Develop their knowledge, understanding and subject-skills related to the science and technology of malting, brewing and distilling, and, on graduation, to have the breadth and depth of knowledge in the subjects required by the industry.
- Develop knowledge and understanding of business and management.
- Broaden their perspective from a possibly narrow first degree to the breadth of knowledge in many and varied disciplines as required in order to be in a position to fully understand and participate in malting, brewing and distilling – such as: research, production, sales, marketing, technical sales.
• Learn the underlying principles, relevant defining concepts, theories and methods, the current state of knowledge and future development possibilities.
• Grasp the global, regional and local contexts of malting, brewing and distilling. Understand the structure of the malting, brewing and distilling industries and to be aware of the political, legal, ethical, health and safety issues in producing, selling and marketing alcoholic drinks.
• Understand the implications that some alcoholic drinks are defined as “food”.
• Enable students to develop their personal abilities, such as team working, communication, time management, prioritisation, job seeking, interview techniques.

ASSESSMENT POLICIES
Understanding, knowledge and subject-specific skills will be evaluated by course work (assignments as essays, problems, case studies, projects and presentations) as well as written examinations.

The MSc project will be assessed by submission of a written thesis.

PROGRAMME STRUCTURE

Mandatory Courses

<table>
<thead>
<tr>
<th>Edinburgh</th>
<th>SBC</th>
<th>Orkney</th>
<th>Dubai</th>
<th>HWUM</th>
<th>IDL</th>
<th>Coll. Partner</th>
<th>ALP</th>
<th>Other</th>
<th>Stage</th>
<th>Semester</th>
<th>Phase</th>
<th>Course Code</th>
<th>Course Title</th>
<th>SCQF Cr</th>
<th>SCQF Lvl</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>B81EZ</td>
<td>Critical Analysis and Research Preparation</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>B91CE</td>
<td>Cereals, Malting and Mashing</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>B91DW</td>
<td>Distilling and Whisky Maturation</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>B91FI</td>
<td>Filtration and Packaging</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>B91RS</td>
<td>MSc Research Project</td>
<td>60</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>B91WF</td>
<td>Wort Boiling and Fermentation</td>
<td>15</td>
<td>11</td>
</tr>
</tbody>
</table>

Optional Courses
## B947-BRD Master of Science in Brewing and Distilling

<table>
<thead>
<tr>
<th>Edinburgh</th>
<th>SBC</th>
<th>Orkney</th>
<th>Dubai</th>
<th>HWUM</th>
<th>IDL</th>
<th>Coll. Partner</th>
<th>ALP</th>
<th>Other</th>
<th>Stage</th>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>SCQF Cr</th>
<th>SCQF Lvl</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B51ET</td>
<td>Foundations of Energy</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B51GE</td>
<td>Renewable Energy Technologies</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B51GH</td>
<td>Environmental Impact Assessment</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B99BM</td>
<td>Beverage Microbiology and Biochemistry</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B99TG</td>
<td>Introduction to Process Technology</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td>A</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C11MF</td>
<td>Management in the Food and Beverage Industries</td>
<td>15</td>
<td>11</td>
</tr>
</tbody>
</table>

### COMPOSITION NOTES (PG)

8 taught courses (5 mandatory and 3 optional) plus a dissertation

- **Mandatory Credits**: 75
- **Optional Credits**: 45
- **Elective Credits**: 60
- **Total**: 180

### AWARDS, CREDITS AND CRITERIA (PG)

**Awards, Credits and Levels**

<table>
<thead>
<tr>
<th>Overall Credits</th>
<th>Specific Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters Degree</td>
<td>180 180 SCQF credits including a minimum of 150 credit at Level 11</td>
</tr>
<tr>
<td>Postgraduate Diploma</td>
<td>120 120 SCQF credits including a minimum of 90 credit at Level 11</td>
</tr>
<tr>
<td>Postgraduate Certificate</td>
<td>60 60 SCQF credits including a minimum of 40 credit at Level 11</td>
</tr>
</tbody>
</table>

**Award Requirements**

<table>
<thead>
<tr>
<th>Total Course Passes</th>
<th>Overall Mark</th>
<th>Overall Grade</th>
<th>Basis of Overall Mark/Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master (Distinction)</td>
<td>8+Dissertation</td>
<td>70</td>
<td>A</td>
</tr>
<tr>
<td>Master</td>
<td>8+Dissertation</td>
<td>50</td>
<td>C</td>
</tr>
<tr>
<td>Diploma (Distinction)</td>
<td>8</td>
<td>70</td>
<td>A</td>
</tr>
</tbody>
</table>
B947-BRD Master of Science in Brewing and Distilling

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>Credit Weighted Average greater than or equal 40% over 8 courses at grades A-E or greater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>8</td>
<td>40</td>
<td>D</td>
</tr>
<tr>
<td>Certificate</td>
<td>4</td>
<td>40</td>
<td>D</td>
</tr>
</tbody>
</table>

**DURATION OF STUDY**

<table>
<thead>
<tr>
<th>IN MONTHS</th>
<th>Full-time</th>
<th>Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Diploma</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Certificate</td>
<td>6</td>
<td>12</td>
</tr>
</tbody>
</table>

**RE-ASSESSMENT (PG)**

1. A student who has been awarded a Grade E or F in a course may be re-assessed in that course. A student who has been awarded a Grade D in a course may be reassessed in that course in order to proceed to or be eligible to receive the award of Masters.
2. A student shall be permitted only one re-assessment opportunity in a maximum of three taught courses. The opportunity for re-assessment in four or more taught courses shall be at the discretion of the Progression Board.
3. Any further re-assessment opportunities in a course will require the approval of the Postgraduate Studies Committee.
4. A student may be permitted, at the discretion of the Progression Board, to be re-assessed in the dissertation, project or other supervised research component of the course of study.

**PROGRESSION TO DISSERTATION/PROJECT**

In accordance with University Regulations, to progress to Masters level a minimum of Grade C is required.