Qualifications

Diploma in Brewing

Module 1

Examination Syllabus 2021

Unit 1: Malt

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Malt	• Barley kernel structure and morphology • The malting process and its impact on malt quality • Malt quality and brewing performance • Typical specifications for base malts, their methods of analysis and their relevance for predicting wort composition, extract efficiency and brewery performance

Unit 2: Speciality Malts and Adjuncts

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Adjuncts	• Speciality malts and their basic principles of manufacture, application and typical specifications • The range of adjuncts available and their typical composition • Their basic principles of manufacture • The applications of adjuncts in brewing • Typical specifications for adjuncts, their methods of analysis and their relevance for predicting wort composition, extract efficiency and brewery performance

Unit 3: Water

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Water	• Characteristics and composition • Typical specifications and their relevance for the brewing process • The principles, functions and respective merits of methods for treating brewing water • The basic principles of design and operation of water treatment plants • Typical specifications for brewing water, methods of analysis and their relevance for brewing quality

Unit 4: Hops

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Hops	• Selecting hops • Hop constituents relevant to brewing • Processed hop products and their basic principles of manufacture • The use of hops and hop products throughout the brewing process • Typical specifications for hops and hop products, their methods of analysis and their relevance for brewing quality

Unit 5: Milling

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Malt intake, handling and storage	• The basic principles and operation of malt intake, handling and storage
Milling equipment and process	• The basic principles of milling • The design and operational principles of mills • Criteria for mill selection

Unit 6: Mashing

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Principles and purpose of mashing	• The key enzymic processes underlying the conversion of malt and adjuncts to fermentable wort • The design and operational principles of mashing systems

Unit 7: Wort Separation

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Principles and purpose of wort separation	• The principles of filtration applied to wort separation • The design and operational principles of wort separation systems • The impact of mashing and wort separation on brewery throughput, yield and quality

Unit 8: Wort Boiling

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Principles and purpose of boiling	• The chemical changes that take place during boiling and their impact on product quality
Design and operation of kettles	• The design and operational principles of kettles • Criteria for kettle selection

Unit 9: Wort Clarification, Cooling and Oxygenation

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Wort clarification	• The design and operational principles of wort clarification systems • Criteria for clarification system selection
Wort cooling and oxygenation	• The design and operational principles of wort cooling and oxygenation systems • Criteria for cooling system selection • Criteria for oxygenation system selection