



## **Qualifications**

### **Diploma in Distilling**

#### **Module 1**

### **Examination Syllabus 2021**

## Unit 1: Cereals

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Cereals	<ul style="list-style-type: none"><li>• Barley</li><li>• Malting process</li><li>• Other cereals</li></ul>

## Unit 2: Other Sources of Extract

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Other sources of extract	<ul style="list-style-type: none"><li>• Molasses</li><li>• Grapes</li><li>• Agave</li></ul>

## Unit 3: Water

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Water	<ul style="list-style-type: none"><li>• Basic quality requirements of water</li><li>• Production requirements of water in distilleries</li><li>• Water sourcing</li><li>• Nutrients supplied by water</li></ul>

## Unit 4: Materials Handling

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Cereal intake, handling, storage, and processing	<ul style="list-style-type: none"><li>• Malt performance – requirements of good quality malt</li><li>• Key malt analytical parameters and their measurement</li><li>• Malt delivery and handling</li><li>• Milling</li></ul>
Non-cereals intake, handling, storage, and processing	<ul style="list-style-type: none"><li>• Molasses intake and processing</li></ul>

## Unit 5: Cereal Wort Production

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Principles and purpose of mashing	<ul style="list-style-type: none"><li>• Mashing procedures for all-malt mash</li><li>• Cereal cooking</li><li>• Enzymes for GNS and whiskey production</li><li>• Wort Properties</li></ul>
Principles and purpose of wort separation	<ul style="list-style-type: none"><li>• Wort separation theory and methods</li><li>• Production and handling of co-products</li></ul>
Wort cooling and oxygenation	<ul style="list-style-type: none"><li>• Wort cooling and oxygenation</li></ul>

## Unit 6: Non-Cereal Wort Production

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Molasses wort production	<ul style="list-style-type: none"><li>• Composition of molasses</li><li>• Principles of mashing/pre-treatment</li><li>• Concerns for molasses wort production</li></ul>
Grape must production	<ul style="list-style-type: none"><li>• Pressing and destemming</li><li>• Pre-fermentation treatment</li><li>• Typical must composition</li></ul>
Agave mosto production	<ul style="list-style-type: none"><li>• Treatment of agave and preparation of mosto</li><li>• Composition of mosto</li></ul>

## Unit 7: Yeast Biochemistry

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Properties of yeast and bacteria	<ul style="list-style-type: none"><li>• Properties of yeast</li><li>• Yeast reproduction</li><li>• Yeast classification</li></ul>
Yeast metabolism	<ul style="list-style-type: none"><li>• Carbohydrate metabolism by yeast</li><li>• Metabolic pathways</li><li>• Production of flavour compounds</li></ul>

## Unit 8: Fermentation

Topic	Candidates should understand and be able to demonstrate using detailed examples:
Yeast handling	<ul style="list-style-type: none"><li>• Yeast handling in the distillery</li></ul>
Principle fermentation variables	<ul style="list-style-type: none"><li>• Progress fermentation</li><li>• Alcohol sensitivity of yeast</li></ul>
Fermentation technology	<ul style="list-style-type: none"><li>• Fermentation vessel types and design</li></ul>
Non-cultured fermentation	<ul style="list-style-type: none"><li>• Microbial spoilage organisms in molasses</li><li>• Brandy fermentations</li><li>• Agave mosto fermentations</li></ul>