UHC31X
Produce fermented dough and batter products

Unit reference number: L/507/5545
Level: 3
Guided Learning (GL) hours: 30

Overview
The aim of this unit is to develop learners’ knowledge, understanding and practical skills in preparing, cooking and finishing fermented dough and batter products for service. Learners will investigate the different types of fermented dough and batter products and how to produce and finish the products using traditional methods, culinary science and contemporary styles. They will be able to identify faults in products as well as correct and rectify them.

They will learn how to use professional practices to control time and temperature, and to finish fermented dough and batter products in a variety of ways whilst following food safety guidelines.

Finally learners will produce and finish a range of fermented dough and batter products using the skills they have developed and they will finish the products to a professional standard.

Learning outcomes
On completion of this unit learners will:

LO1 Know how to produce and cook fermented dough and batter products
LO2 Know how to finish fermented dough and batter products
LO3 Be able to prepare, cook and finish fermented dough and batter products
Assessment requirements

Learners must produce a portfolio of evidence which includes:

1. Service portfolio
2. Summative practical assessment

1. Service portfolio

Learners must produce a service portfolio.

At a minimum the service portfolio for this unit must include, producing and finishing covering all of the following:
- Prepared and cooked a minimum of 6 types of fermented dough and batter products
  - White bread
  - Wholegrain bread
  - Sour dough
  - Flavoured breads
  - Baguettes
  - Focaccia
  - Ciabatta
  - Laminated dough goods
  - Brioche
  - Savarin
  - Rye breads
  - Seasonal doughs
  - Blinis
- Used a minimum of 6 finishing techniques
  - Glazing
  - Dipping
  - Dusting/dredging
  - Crème Chantilly
  - Crème patisserie
  - Jam
  - Fruits/fruit purée
  - Chocolate
  - Marzipan
  - Herbs
  - Spices
  - Garlic

Evidence from the practical assessment must also be presented in the service portfolio.

The service portfolio must be completed prior to learners undertaking the practical assessment.
2. Summative practical assessment

Learners must carry out a complete assessment which will be observed and marked by centre assessors.

The practical assessment must take place in a real or realistic working environment and at a minimum the practical assessment for this unit must cover:

- Producing a fermented dough or batter product
- Finishing a fermented dough or batter product

Recorded professional discussion can also be used as an assessment method attached to the practical assessment and is particularly useful for gathering evidence for criteria related to evaluation and reflection. Professional discussions should be planned and recorded.
Unit content

LO1 Know how to produce and cook fermented dough and batter products

Identify a range of fermented dough and batter products:
- Fermented dough products
  - Traditional, such as white and wholemeal loaves and rolls, sandwich loaf, split tin, farmhouse, batch loaf, plait, Coburg, cob, bloomer, Vienna, cottage
  - Ethnic and speciality breads such as pitta, naan, chapattis, paratas and roti, ciabatta, focaccia – flavourings such as herbs, garlic, sun-dried tomatoes or olives are frequently added. Baguette, soda bread, rye breads, cholla, bagels, wraps or flour tortillas
  - Exotic, contemporary breads that have additions such as sun-dried tomatoes, basil, garlic, olives and onions and other herbs and flavours
  - Artisan breads made by highly trained bakers using traditional slower methods
  - Gluten free bread – using gluten free flour
- Batter products
  - Savarins, babas, brioche, blinis

Identify the tools and equipment used when producing fermented dough and batter products:
- Proofing drawer, bowls, spoons, whisks, mixers, sieves, scales, tins, moulds, knives, ovens

Describe the range of ingredients used in the production of fermented dough and batter products:
- Flour – wheat is grown in many parts of the world. However flour made from `hard` wheats such as those produced in North America are higher in protein/gluten. Hard and soft wheats in milling terms are equivalent to strong and weak flours in baking. Wheat flour is the key ingredient in most bread. Flour quality is particularly important in bread making as the quality of the flour will have a significant impact on the finished product. When flour is moistened and stirred, beaten or kneaded, gluten develops to give dough `stretch`. The elastic framework of gluten holds the gas produced by the fermentation action of yeast
- Yeast – yeast requires moisture, food and warmth for growth. When these requirements are satisfied, the yeast grows. Its function in bread making is to produce carbon dioxide gas to enable the dough to rise, expand the dough’s cellular network to form bread crumb and give bread its characteristic flavour and aroma
- Salt – salt is an essential ingredient in bread. It is used in very small amounts to give bread flavour. It also helps to strengthen the gluten and help fermentation to produce bread of good volume and texture
- Water – water is used to produce the dough. It is important that the correct quantity of water is used when making bread because it affects the dispersal of the other ingredients
- Other Ingredients
  - Fat – non-hydrogenated vegetable fat is used in very small quantities, this helps to keep the bread soft over life
  - Flour Treatment Agents – ascorbic acid (E300 otherwise known as Vitamin C) is the most commonly used flour treatment agent in bread making. It is used to strengthen the dough and has a beneficial effect on the volume, crumb structure and softness of the bread
- Emulsifiers – All emulsifiers are based on vegetable oils, they are used to provide dough stability in addition to improving loaf volume and crumb structure, and in maintaining softness
- Enzymes – enzymes may be added to the bread dough to supplement the enzymes naturally present in the flour and minimise variations caused by environmental factors such as climate and soil quality. Enzymes are destroyed by heat, they are therefore regarded as processing aids and, in accordance with current EU legislation, are not required to be labelled in the list of ingredients
- Preservatives – preservatives, such as acetic acid (vinegar), are often used in commercial baking to ensure the freshness of the product
- Soya flour – soya flour is milled from un-cooked soya beans, it works with the oxygen in the air to strengthen the dough, to provide support and structure to the loaf during baking. It also helps provide a creamy, ‘bready’ flavour

**Explain how fermented dough is produced:**

- **Scaling** – all ingredients must be weighed accurately. Special care should be taken when measuring spices and other ingredients used in small quantities. This is very important with salt which affects the rate of fermentation
- **Mixing** – mixing has three main purposes: to combine ingredients into a uniform, smooth dough, to distribute the yeast evenly throughout the dough, to develop the gluten. There are three mixing methods used for yeast doughs - the straight dough method, the modified straight dough method, and the sponge method
- **Fermentation** – fermentation (first rising or first proofing) is the process when the yeast acts on the sugar and starches in the dough to produce carbon dioxide and alcohol. The dough should be placed in a greased container large enough to allow for expansion. The container should be covered and the dough left to rise in a warm, draught-free place (80°F). Fermentation is complete when the dough has doubled in size. This process may be slowed down by putting it in the refrigerator overnight. The dough must then come back to room temperature before continuing the process. If the dough rises too quickly before you have the time to finish it, you can simply punch the dough down and allow it to ferment again. The dough can rise several times. Gluten becomes smoother and more elastic during fermentation, so it can stretch and hold more gas. Dough that is under-fermented will not develop the proper volume and the texture will be poor. A dough that ferments too long or at too high a temperature will become sticky, slightly sour, and be hard to work with. Yeast action continues until the cells are killed when the temperature reaches 140°F in the oven
- **Punching** – a method of deflating the dough that expels the carbon dioxide, redistributes the yeast for further growth, relaxes the gluten, and equalises the temperature throughout the dough. Pull the dough on all sides, fold it over the centre, and press down. Then turn the dough upside down in the container
- **Scaling (measuring)** – scaling is simply dividing or measuring the dough into pieces of the same weight. This should be done quickly so the dough doesn’t over-ferment or develop a dry exterior crust. A bench knife or knife should be used. NEVER pull or tear the dough into separate portions
- **Rounding** – after scaling, the pieces of dough should be shaped into smooth round balls. Rounding simplifies the shaping process, and helps retain gases produced by the yeast
- **Benching (relaxing)** – the rounded portions of dough are covered and allowed to relax for 10 to 20 minutes. This relaxes the gluten and makes the shaping of the dough easier
- **Panning (shaping)** – shaping into rolls, loaves, or desired shapes and placed in pans or on baking sheets. All gases should be expelled during panning. Bubbles left in the dough will result in large air holes in the baked product. Seams should be centre bottom of each piece
- **Proofing (rising) and proofing (second fermentation, second rising)** – proofing is a continuation of the process of yeast fermentation. This increases the volume of the
shaped dough. The best conditions for proofing are 90°F and 85% humidity. The dough should again double in volume. To test touch lightly, if the dough springs back slowly it is done. If it is still firm and elastic, it needs more proofing. If the dent remains or dough deflates, the dough is over-proofed. Under-proofing results in poor volume and dense texture. Over-proofing results in coarse texture and loss of flavour. French bread is usually given a long proof to create its characteristic open texture. The strong gluten can withstand the extra stretching of long proofing. Rich doughs are slightly under-proofed, because their weaker gluten will not withstand too much stretching

- **Baking** – important things happen during this process. Oven spring is the rapid rise in the oven due to the production and expansion of trapped gases as a result of the oven’s heat. The yeast is very active at first, but stops acting when the temperature reaches 140°F. Then coagulation of proteins and gelatinisation of starches occurs, so the dough holds shape and finally browning occurs

- **Oven temperatures and baking times** – when the correct temperature is used, the process works so that the inside of the dough becomes completely baked while the crust achieves the desired colour at the same time. Larger pieces are baked at a lower temperature for a longer time than smaller rolls. Rich, sweet doughs are baked at a lower temperature because their fat, sugar and milk content make them brown faster. French breads are generally made with no sugar and a long fermentation, so they require a very high temperature to achieve the desired crust. Golden brown crust and a hollow sound when loaves are tapped with the knuckle are a good indication that the bread is cooked

- **Cooling** – after baking, bread must be removed from the pans and placed on a rack to cool. This allows the excess moisture and alcohol that was created during fermentation to escape. Smaller rolls may be left on their baking sheet

- **Storing** – bread served within 8 hours can be left on the rack. For longer storage wrap cooled bread, label and date

**Identify appropriate flavour combinations for fermented dough and batter products:**
- Sea salt, herbs, garlic, olives, sun-dried tomatoes, walnut, sugar, jam, cream, vanilla, fruits

**Explain how to control time, temperature and environment to achieve desired outcome when producing fermented dough and batter products:**
- Professional practices and remaining organised
- Keeping ingredients at correct temperature
- Working with dough at correct temperature
- Proving in correct atmosphere

**Explain the effect of preparation and cooking methods on the end product:**
- Achieving a quality end product
- Following recipes and recipe specifications
- Referring to specification photographs
- Correct colour
- Correct consistency
- Correct texture
- Correct flavour
- Correct portion size

**State quality checks to be made during production of fermented dough and batter products:**
- Appearance
- Fermentation
• Proofing correctly
• Consistency
• Aroma
• Portions
• Degree of cooking

**Identify potential faults for a range of fermented dough and batter products:**
• Insufficient yeast
• Tough and closed crumb texture
• High crust
• Pale crust
• Insufficient salt and sugar
• Dry
• Under-proofed or over-proofed
• Degree of cooking

**Describe procedures for correcting faults with products:**
• Reshaping and remoulding
• Discarding products not meeting quality requirements
• Adding ingredients
• Seeking advice from appropriate person
LO2 Know how to finish fermented dough and batter products

**Explain the finishing techniques for fermented dough and batter products:**
- Traditional, classical and modern skills and techniques – glazing, brushing, dipping, dusting, spreading, glazing
- Culinary science – fondant, apricot glaze
- Contemporary styles – moulding, shaping, decorating

**Describe fillings, glazes, creams and icings for fermented dough and batter products:**
- Glazes, cream, crème Chantilly, crème pâtissière, jams, fruits, fruit purées, chocolate, marzipan, herbs, spices, garlic

**Explain how to store fermented dough and batter products:**
- Room temperature, cool, dry, humidity control, dough products with high-risk foods refrigerated, bags, wrappers, wrapped in paper, freezing, avoiding cross-contamination

**Explain the ingredients that may cause allergic reactions:**
- Flours, gluten, nuts, dairy products, eggs
LO3 Be able to prepare, cook and finish fermented dough and batter products

Comply with uniform and personal appearance standards:
- Wear the correct uniform to comply with health and safety, food safety, personal protective equipment (PPE) regulations. The uniform must be clean, hair must be tied back and put under a hat or hair net, beards or facial hair must be covered with a net and a clean apron must be used to prevent cross-contamination. Nails must be short, clean and unpolished. To prevent cross-contamination, no jewellery should be worn; lost jewellery will contaminate food items. Strong smelling perfume or body spray should be avoided as this will affect the flavour of delicate food items.

Comply with food safety and food hygiene regulations:
- Make sure food is safe to eat, make sure you don’t add, remove or treat food in a way that makes it harmful to eat; make sure the food is the same quality that you say it is, make sure you don’t mislead people by the way food is labelled, advertised or marketed, keep records on where you got food from and show this information on demand – known as ‘traceability’, withdraw unsafe food and complete an incident report, tell people why food has been withdrawn or recalled e.g. a leaflet or poster, display your food hygiene rating (if you sell food direct to the public).
- Food additives – only use an approved additive, only use it if it is approved for use in that food, the food additive doesn’t exceed the maximum permitted level.
- Materials and packaging that can be reasonably expected to come into contact with food are called ‘food contact materials’. These can include packaging, food processing equipment, cookware, work surfaces.
- Make sure food contact materials do not transfer anything to food they touch.
- Make sure food contact materials do not change the food they touch.
- When inspected, be able to show where the food contact materials came from.
- To keep food safe from bacteria, you should follow HAACP. Bacteria that cause serious health problems are
  - E.coli O157 and campylobacter
  - Salmonella, especially with the storage and handling of eggs.

Apply hazard analysis and critical control points (HACCP):
- To avoid hazards. This keeps your food safe from biological, chemical and physical safety hazards.

Follow mise en place work plan:
- Plan work to timescales and follow work plan to ensure mise en place is prepared on time and correctly and the work plan should be realistic and adjusted when necessary. Work plans help to ensure that food items and dishes are ready for service.
- Work with accuracy (reduced waste, maximum yield)
- Work with speed
- Work with proficiency

Produce fermented and batter products in line with product requirements:
- Produce – for example, scaling, mixing, fermentation, punching, rounding, benching, planning, proofing
- Use the correct cooking methods for the dish requirements
- Cook the products at the correct temperatures
- Cook the products using the correct timings
Finish fermented dough and batter products to meet dish requirements:
- Use correct fillings, glazes, creams and icings appropriate to the product, for example a savarin will be soaked in a flavoured syrup after cooking, filled with cream and then glazed with a simple jam and water glaze
- Use the correct finishing and decorating techniques appropriate for the products. for example a focaccia can be finished with a generous drizzle of olive oil, a sprinkle of sea salt and a couple of rosemary sprigs
- Implement correct storage procedures:
  - Date, labelling, covered, correct position, stock rotation

Review the finished fermented dough and batter products identifying strengths and areas for improvement:
- Taste, texture, appearance, flavour combinations
- Appropriate selection of
  - Preparation methods
  - Finishing methods
- Recommendations for improvements
  - To preparation, cooking and finishing the dish
  - To the finished dish (texture, appearance, flavour combination)
  - To their own performance during the practical session
Employability skills to be demonstrated throughout the practical assessment

**Communication:**
- With the head chef during service
- With other sections during service
- Talking to the head chef and other sections to coordinate finishing dishes to arrive at the pass on time

**Commercial and environmental awareness:**
- Eco-friendly and cost-efficient use of resources (cleaning products and consumables), disposal of waste, using less expensive ingredients, locally sourced products
## Assessment criteria

In order to pass this unit, learners must achieve all pass criteria. The pass criteria relate to the proficient demonstration of skills and knowledge.

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<tr>
<th>Learning outcome</th>
<th>Pass criteria</th>
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<td>LO1 Know how to produce and cook fermented dough and batter products</td>
<td>The learner can:</td>
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<td>P1 Identify a range of fermented dough and batter products</td>
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<td>P2 Identify the tools and equipment used when producing fermented dough and batter products</td>
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<td>P3 Describe the range of ingredients used in the production of fermented dough and batter products</td>
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<td>P4 Explain how fermented dough is produced</td>
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<td>P5 Identify appropriate flavour combinations for fermented dough and batter products</td>
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<td>P7 Explain the effect of preparation and cooking methods on the end product</td>
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<td>P8 State quality checks to be made during production of fermented dough and batter products</td>
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<td>P9 Identify potential faults for a range of fermented dough and batter products</td>
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<td>P10 Describe procedures for correcting faults with products</td>
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<td>LO2 Know how to finish fermented dough and batter products</td>
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<td>P14 Explain the ingredients that may cause allergic reactions</td>
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<td>LO3 Be able to prepare, cook and finish fermented dough and batter products</td>
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<td>P17 Apply hazard analysis and critical control points (HACCP)</td>
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<td>P18 Follow mise en place work plan</td>
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<td>P19 Produce fermented dough and batter products in line with dish requirements</td>
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<td>P20 Finish fermented dough and batter products to meet dish requirements</td>
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<td>P21 Review the finished fermented dough and batter products identifying strengths and areas for improvement</td>
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### Assessment guidance

Assessors must use the amplified assessment guidance in this section to judge whether assessment criteria have been achieved in the practical assessment.

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<th>P15 Comply with uniform and personal appearance standards</th>
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<td>Learners must be professionally presented for practical sessions. They need to wear the correct uniform and PPE. The uniform must be clean. Hair must be tied back and under their hat and beard nets must be worn if appropriate. The learner must have minimum make up, no jewellery, no strong smelling perfume/body spray and short, clean unpainted nails.</td>
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<th>P16 Comply with food safety and food hygiene standards</th>
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<td>Learners must show that they can work within the current food safety regulations throughout the assessment. Their methods and behaviour must minimise the risk of cross-contamination and follow routines to avoid potentially severe health hazards.</td>
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<th>P17 Apply hazard analysis and critical control points (HACCP)</th>
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<td>Learners must follow the HACCP procedures throughout the practical assessment.</td>
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<th>P18 Follow mise en place work plan</th>
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<td>Learners must be able to follow their work plan which needs to include the resources needed, the required ingredients to cook and finish the dish and tasks with time allocations. The work plan must be realistic and the learner needs to follow the plan during mise en place. At a pass level the plan may need to be adjusted during the mise en place or the plan may in general lack detail.</td>
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<th>P19 Produce fermented dough and batter products in line with dish requirements</th>
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<td>Learners must be able to show they have the skills to produce fermented dough and batter products to the dish specifications and requirements. The cooking method(s) for the chosen items must be in line with the dish requirements, for example the oven must be at the correct temperature and item cooked for the correct amount of time, so the products meet the requirements. Fermented dough and batter products will not be over-cooked or under-cooked or over-proofed or under-proofed and the texture of the finished products will be in line with the dish requirements.</td>
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<th>P20 Finish fermented dough and batter products to meet dish requirements</th>
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<td>Learners must use the correct finishing techniques for the chosen fermented dough and batter product. The product produced must be appropriately finished for example a focaccia will be finished with a generous drizzle of olive oil a sprinkle of flaky sea salt and a couple of rosemary sprigs (leaves stripped and finely chopped). The finished products will be stored using the correct procedures for storage for the item produced.</td>
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<th>P21 Review the finished fermented dough and batter products identifying strengths and areas for improvement</th>
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<td>Both the assessor and learners review finished products. Learners to identify the main strengths of the products and these are in line with the assessor’s feedback. Through the evaluation process learners can recognise the areas for improvement based on taste, flavour balance, flavour combinations and the overall look of the dish.</td>
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Resources

The special resources required for this unit are access to a real or realistic working environment which supports the provision of producing fermented dough and batter products.

Recommended books:

Delivery guidance

Teachers are encouraged to use innovative, practical and engaging delivery methods to enhance the learning experience. Learners may benefit from:

- Meaningful employer engagement so they relate what is being learned to the real world of work and understand commercial competence and the use of products, tools and equipment
- Work experience within a commercial professional kitchen or catering organisation so they can practise to hone their skills in a real environment
- Using interactive information and technology systems and hardware so they can learn about concepts and theories, research current trends, research product knowledge and produce visual aids

Links with other units

This unit is closely linked with the following units:

UHC11M Food safety for catering
Food safety must be embedded into every practical session and learners must be able to apply the theory of food safety to every day practices in the kitchen.

UHC93M Planning for preparing, cooking and finishing dishes
Planning is the key to success therefore learners will be required to create and follow a mise en place time plan for their practical assessments as included in this unit’s specification. A mise en place work plan should be used for every practical session and learners should be able to implement and follow their mise en place work plan for the practical session.