

SOCIAL AND PERSONAL SERVICES

# Bakery



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# WorldSkills Occupational Standards (WSOS)

## Occupation description and WSOS

### The name of the occupation is

Bakery

### Description of the associated work role(s) or occupation(s)

The baker is a highly skilled professional, with high level of knowledge about food and nutrition, who produces a wide range of bread and pastry items.

The baker produces all varieties of fresh and tasty bakery products, made of any kind of grains. Different types of fermentation and other processes will be used to turn the raw material in to sweet or savoury products. For example, wheat bread, rye bread, artisan bread, enriched breads, laminated products, and ingredients to flavour their bakery products.

These items will appear in a large number of bakeries. Bakers may also produce elaborate displays of decorative breads using creative skills and knowledge.

A high degree of specialist knowledge and skill is required. Bakers have undergone years of training in order for them to develop the level of skill required and a good understanding of sustainability. Bakers will be proficient in a wide range of specialist techniques and technology to develop and create a variety of bakery products. An artistic talent and artisan skills with the attention to detail are required, alongside the ability to work effectively and economically in order to achieve outstanding results within set timeframes.

Bakers must have knowledge about the functions, compatibility, and reactions of ingredients to create a new recipe.

Bakers must have a good understanding about reformulating recipes and adapting to a changing environment. The ability to work on their own initiative is essential. They will use a range of specialist equipment, technology, and materials in an environmentally friendly manner. The professional baker must take account of the quality of ingredients and the health and safety requirements of customers. They must respect those ingredients and work to high levels of food hygiene and safety.

Specialist bakers can develop careers, such as owning, managing, and working in all types of bakeries including high quality, family, and specialized shops. Careers in teaching and working with ingredients and machinery companies within the baking industry are also options.

It is often the case that specialist retail shops sell hand-made and decorated pastry products, artisan breads, and decorative dough's, which are prepared using the skills of a specialist baker.

## General notes on the WSOS

The WSOS specifies the knowledge, understanding, and specific skills that underpin international best practice in technical and vocational performance. It should reflect a shared global understanding of what the associated work role(s) or occupation(s) represent for industry and business ([www.worldskills.org/WSOS](http://www.worldskills.org/WSOS)).

The skill competition is intended to reflect international best practice as described by the WSOS, and to the extent that it is able to. The Standard is therefore a guide to the required training and preparation for the skill competition.

In the skill competition the assessment of knowledge and understanding will take place through the assessment of performance. There will only be separate tests of knowledge and understanding where there is an overwhelming reason for these.

The Standard is divided into distinct sections with headings and reference numbers added.

Each section is assigned a percentage of the total marks to indicate its relative importance within the Standards. This is often referred to as the “weighting”. The sum of all the percentage marks is 100. The weightings determine the distribution of marks within the Marking Scheme.

Through the Test Project, the Marking Scheme will assess only those skills that are set out in the Standards Specification. They will reflect the Standards as comprehensively as possible within the constraints of the skill competition.

The Marking Scheme will follow the allocation of marks within the Standards to the extent practically possible. A variation of up to five percent is allowed, provided that this does not distort the weightings assigned by the Standards.

# WorldSkills Occupational Standards

Section	Relative importance (%)
<b>1 Work organization and communication</b>	<b>8</b>

The individual needs to know and understand:

- Principles of business
- The stages from buying raw material to producing valuable products and selling them to costumers
- The importance of minimizing waste and maximizing sustainability
- The factors bearing on ingredients used in bakery including seasons, availability, costs, storage, and use
- The range of tools and equipment used in bakery
- Legislation and good practice relating to the purchase, storage, preparation, cooking, baking, and service of food products
- How bakery products should be displayed for sale
- The importance of displays and notices as sales and communication tools
- Legal restrictions on the presentation of promotional materials
- The importance of appearance when on public view and dealing with customers
- The importance of effective communications across teams, colleagues, contractors, and other professionals
- The need to communicate effectively with customers

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The individual shall be able to:

- Prepare and correctly use tools and equipment
  - Prioritize and plan work effectively to work within a given time
  - Show respect for raw materials
  - Use ingredients cost-effectively and minimize waste
  - Prepare products within prescribed costs
  - Pre-order goods and materials accurately for planned work
  - Work efficiently and cleanly, paying attention to the workplace and the people in it
  - Demonstrate good workflow skills
  - Demonstrate inspiration, flair, and innovation in design and work techniques
  - Work within given themes
  - Produce large quantities of bakery products to a consistent standard
  - Be consistent with size and weight of products in order to maintain customer satisfaction and profit margins
  - React professionally and effectively to unexpected situations
  - Work to deadlines
  - Have all costumers' orders ready at the right time
  - Have professional conversations with customers
  - Work out the right products with customers according to their wishes for their special orders
  - Work effectively with colleagues and other professionals
  - Be an effective team member
  - Display products in order to maximize sales
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Section	Relative importance (%)
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- Always pay attention to own cleanliness and appearance
- Communicate effectively with colleagues, teams, and customers
- Provide advice and guidance on specialist matters to managers, colleagues, and customers
- Develop recipes in a way that every other baker can read them and achieve good quality products

<b>2</b>	<b>Food hygiene and workplace health, safety, and environment</b>	<b>8</b>
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The individual needs to know and understand:

- Legislation and good practice relating to the purchase, storage, preparation, cooking, and service of food
- Quality indicators for fresh and preserved foods
- The causes of deterioration of food
- The range of tools and equipment used in bakery
- Legislation and safe working practices in a bakery kitchen and for using commercial equipment

The individual shall be able to:

- Follow all personal hygiene standards and safety regulations for food storage, preparation, cooking, and service (HACCP)
- Comply with all Health and Food Safety regulations and best practices
- Store all commodities safely according to HACCP
- Ensure all work areas are cleaned based on the highest standards
- Apply the business internal HACCP concept to the last detail
- Work safely and uphold accident prevention regulations
- Use all tools and equipment safely and within manufacturer's instructions
- Promote health, safety, and environment and food hygiene within the working environment

<b>3</b>	<b>Enriched breads</b>	<b>12</b>
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The individual needs to know and understand:

- The factors that impact on the performance of yeast
- The use of yeast in its various forms
- The range of sweet and enriched dough products
- How to produce and enriched dough enhancing with such ingredients as sugar, eggs, butter, and milk
- The impact of enriching ingredients on the proving process
- How sweet or enriched dough products should be displayed for sale
- The different techniques for shaping like braiding, moulding in different shapes, baking or frying these products
- How sweet or enriched dough products should be store

Section	Relative importance (%)
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The individual shall be able to:

- Produce a range of sweet or enriched doughs
- Produce a range of bakery products using sweet or enriched dough
- Produce products in bulk to a consistent size, shape, appearance, flavour, and standard
- Undertake appropriate frying, baking or boiling process
- Use appropriate flavourings effectively
- Finish or decorate products as appropriate
- Display products for sale

<b>4 Wheat Breads</b>	<b>25</b>
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The individual needs to know and understand:

- The factors that impact on the performance of yeast
- The use of yeast in its various forms
- The stages in the bread producing process
- The range of large and small bread products
- The range and characteristics of bread products from around the world
- The importance of appearance, texture, and taste
- The influence of different working techniques to produce bakery products
- The importance of the dough temperature
- The importance of developing gluten structure in wheat doughs
- How the different doughs must be handled and stored
- The science of fermentation such as types of fermentation, substances involved in the fermentation process, and acidification
- When to use an all-in dough method for a bakery product
- The benefits of using a preferment dough leavening method, with starters like polish, sponge, biga, and levains
- The benefits of refrigeration technology systems to control the fermentation to the next day for long-term leavening methods
- The purpose of pre-absorption or starch gelatinization methods known as soaker, boiled dough, or mash
- The sourdough leavening method with and without baker's yeast

Section	Relative importance (%)
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The individual shall be able to:

- Use the knowledge of the impact of various milling products and flours on bakery products
- Use own understanding of the impact of dry and liquid raw materials to make different doughs
- Apply knowledge of the characteristics of raw materials in bakery products
- Use appropriate ingredients and flavourings effectively
- Devise products demonstrating innovation and flair
- Formulate recipes to make quality products
- Create recipes to produce a range of breads, rolls, and loaves
- Design products in bulk to a consistent size, shape, appearance, flavour, and standard
- Use appropriate flavourings effectively
- Design display pieces based on clients' briefs
- Create designs that take account of the purpose of the pieces and the environment where they will be displayed

<b>5 Laminated Doughs/Pastries</b>	<b>20</b>
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The individual needs to know and understand:

- The principle of lamination as a form of raising a paste or dough
- The range of laminated pastes and doughs used in bakery products
- Methods of making and using laminated pastes and doughs
- Colour applications, taste combinations, and texture coordination
- The range and uses of doughs and pastes used to produce bakery products
- The range of raw materials and how can they be worked into a filling
- Why fillings which are baked need to be stable at high temperature
- The effect of using seasonal fruits and vegetables for fillings
- The importance of appearance, texture, and taste

The individual shall be able to:

- Produce high quality laminated pastes and doughs
- Produce bakery products using laminated pastes and doughs including Danish pastries, croissants, pains au chocolate, brioche, and puff pastry products
- Produce products in bulk, ensuring that the quality, size and finish remains consistent
- Finish or decorate products
- Display products for sale
- Store products safely and hygienically at the point of sale

Section	Relative importance (%)
<b>6 Speciality breads</b>	<b>12</b>

The individual needs to know and understand:

- The importance of shaping and decorating dough before baking
- The commonly used shapes for certain products which are known around the world
- The range of tools and equipment used in bakery for shaping and decorating
- The importance of recipes for quality control
- The range and characteristics of bakery products which are known around the world, leavened and unleavened
- Colour applications, taste combinations, and texture coordination
- Basic principles involved in accurately combining ingredients in order to produce products
- How to create appearance, texture, and taste from the bakery product by using different ingredients and working techniques
- How to process different grains, cereals, and pseudo cereals
- The impact of various flours and ingredients on finished products
- The manipulation of raw materials through production techniques
- The influence of different working techniques to produce bakery products
- Colour applications, taste combinations, and texture coordination
- Finesse and artistic appreciation
- The importance of the finale proof in its different methods like on couches, on loading devices, in bannetons, or on trays
- The different methods of finishing before baking. This can be reshaping, cutting, scoring, piercing, sprinkling, brushing, spreading, dusting, and so on

The individual shall be able to:

- Shape common bakery products out of dough
- Recognize when the dough has fermented enough and is ready to scale and shape
- Handle and scale doughs appropriated after fermenting
- Shape bread products consistently and to pre-determined shapes
- Produce small and large bakery products
- Be creative to shape dough following customer orders
- Shape large quantities of the same product identically
- Produce products in bulk ensuring that the quality, size, and finish remain consistent
- Make filled products which are filled and decorated before baking
- Apply different techniques for shaping
- Decide how long the product needs to have a final proof before baking
- Finish the decoration before the dough is baked, using different techniques
- Use various techniques to produce display pieces or decorative breads



Section	Relative importance (%)
<b>7 Decorative Breads</b>	<b>15</b>
<p>The individual needs to know and understand:</p> <ul style="list-style-type: none"> <li>• The purpose and function of display pieces</li> <li>• The importance of creativity of design</li> <li>• Various techniques used to produce display pieces</li> <li>• The hygiene implications of displaying edible pieces</li> </ul>	
<hr/> <p>The individual shall be able to:</p> <ul style="list-style-type: none"> <li>• Design display pieces based on clients' briefs</li> <li>• Create designs that take account of the purpose of the pieces and the environment where they will be displayed</li> <li>• Create display pieces to meet specifications</li> <li>• Use appropriate ingredients to assemble products if required</li> <li>• Work with leavened and unleavened doughs together in harmony</li> </ul>	
<b>Total</b>	<b>100</b>

## References for industry consultation

WorldSkills is committed to ensuring that the WorldSkills Occupational Standards fully reflect the dynamism of internationally recognized best practice in industry and business. To do this WorldSkills approaches a number of organizations across the world that can offer feedback on the draft Description of the Associated Role and WorldSkills Occupational Standards on a two-yearly cycle.

In parallel to this, WSI consults three international occupational classifications and databases:

- ISCO-08: (<http://www.ilo.org/public/english/bureau/stat/isco/isco08/>)
- ESCO: (<https://ec.europa.eu/esco/portal/home> )
- O\*NET OnLine ([www.onetonline.org/](http://www.onetonline.org/))

This WSOS appears most closely to relate to *Bakers*:

<https://www.onetonline.org/link/summary/51-3011.00>

and Baker:

<http://data.europa.eu/esco/occupation/1aadb308-432a-4d01-b54b-b4f7f76dd419>

Adjacent occupations may also be explored through these links.

The following table indicates which organizations were approached and provided valuable feedback for the Description of the Associated Role and WorldSkills Occupational Standards in place for WorldSkills Shanghai 2022.

Organization	Contact name
Accor - Pullman Bangkok King Power	Ulhas Shetty, Director of Operations
Richemont Center of Excellence (Switzerland)	Markus Zimmerli Managing director of the education system for baker, confectioner, chocolatier and sales
SBC – Schweizer Bäcker – Confiseurmeister Verband (Switzerland)	Urs Wellauer, CEO