



Republic of Rwanda
Ministry of Education



RTB | RWANDA
TVET BOARD

RQF LEVEL 5



FOOD AND BEVERAGE OPERATIONS

FBOBP501

Advanced
Bakery and
Pastry Products
Preparation



TRAINEE'S MANUAL

April 2025



Republic of Rwanda
Ministry of Education



ADVANCED BAKERY AND PASTRY PRODUCTS PREPARATION



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LIST OF ABBREVIATIONS AND ACRONYMS

CBET: Competence Base Education and Training

PPE: Personal Protective Equipment

RQF: Rwanda Qualification Framework

RTB: Rwanda TVET Board

TVET: Technical and Vocational Education and Training

RDB: Rwanda Development Board

INTRODUCTION

This trainee's manual encompasses all necessary skills, knowledge and attitudes required to **Prepare Advanced Breads and Pastry products**. Students undertaking this module shall be exposed to practical activities that will develop and nurture their competences. The writing process of this training manual embraced competency-based education and training (CBET) philosophy by providing practical opportunities reflecting real life situations.

The trainee's manual is subdivided into units, each unit has got various topics. You will start with a self-assessment exercise to help you rate yourself on the level of skills, knowledge and attitudes about the unit.

A discovery activity is followed to help you discover what you already know about the unit. After these activities, you will learn more about the topics by doing different activities by reading the required knowledge, techniques, steps, procedures and other requirements under the key facts section, you may also get assistance from the trainer. The activities in this training manual are prepared such that they give opportunities to students to work individually and in groups.

After going through all activities, you shall undertake progressive assessments known as formative and finally conclude with your self-reflection to identify your strengths, weaknesses and areas for improvement.

Do not forget to read the point to remember the section which provides the overall key points and takeaways of the unit.

Module Units:

Unit 1: Perform pre- baking activities

Unit 2: Make advanced bread

Unit 3: Make advanced pastry products

Unit 4: Perform post-baking activities

UNIT 1:PERFORM PRE- BAKING ACTIVITIES



Unit summary

This unit provides you with the knowledge, skills and attitudes required to perform pre- baking activities. At the end of this unit, the learner will be able to maintain personal hygiene, apply pastry kitchen hygiene and safety and select tools and equipment for advanced bread and pastry products.

Self-Assessment: Unit 1

1. Referring to the learning unit illustrations above discuss the following:
 - a. What does the illustration show?
 - b. What do you think this learning unit is about based on the illustration?
2. Fill in and complete the self-assessment table below to assess your level of knowledge, skills and attitudes under this unit.
 - a. There is no right or wrong way to answer this assessment. It is for your own reference and self-reflection on the knowledge, skills and attitudes acquisition during the learning process.
 - b. Think about yourself: do you think you have the knowledge, skills or attitudes to do the task? How well?
 - c. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.
 - d. At the end of this learning unit, you will assess yourself again.

My experience	I do not	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Identify hygiene and food safety principles					
Explain hygiene and food safety principles					
Identify cleaning products , tools and equipment					

My experience	I do not	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Describe essential kitchen safety protocols					
Explain the importance of using PPE					
Apply personal grooming standards					
Maintain equipment handling and safety measures					
Operate equipment safely by adhering to handling guidelines					
Select appropriate tools and equipment based on pastry or bakery recipe.					
Apply food safety and					

My experience	I do not	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
hygiene practices					
Practice hygiene principals by regularly using PPEs					
Exhibit vigilance in monitoring kitchen safety and cleanliness standards					
Show self-confidence when preparing the kitchen environment					
Exhibit tidiness and organized throughout tasks.					
Demonstrate commitment to maintaining personal grooming and hygiene					

My experience	I do not	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Encourage a culture of safety and cleanliness by mentoring team members					
Show teamwork and collaboration spirits.					



Key Competencies:

Knowledge	Skills	Attitudes
1. Explain hygiene and food safety principal	1. Apply personal grooming standards	1. Exhibit vigilance in monitoring kitchen safety and cleanliness standards
2. Identify cleaning products , tools and equipment	2. Maintain equipment handling and safety measures	2. Show self-confidence when preparing the kitchen environment
3. Describe essential kitchen safety protocols	3. Operate equipment safely by adhering to handling guidelines	3. Exhibit tidiness and organized throughout tasks
4. Explain the importance of using PPE	4. Select appropriate tools and equipment based on pastry or bakery recipe.	4. Demonstrate commitment to maintaining personal grooming and hygiene
	5. Apply food safety and hygiene practices	5. Encourage a culture of safety and cleanliness by mentoring team members
	6. Practice hygiene principals by regularly using PPEs	6. Show teamwork and Collaboration spirits.
	7. Organize pastry tools and equipment	7.



Discovery activity:



Task 1:



Figure 1: Pastry chef kitchen PPE, tools and equipment

Observe the illustration above and answer the questions below

1. Discuss the elements that you see in the illustration.
2. What topics do you think this learning unit will include based on the pictures above?

Topic 1.1: Checking personal grooming for pastry chef and kitchen safety



Activity 1: Problem Solving



Task 2:

Read the following scenario and answer the questions that follow:

Emmy is a trainee in level 5 Food and Beverage Operations, he carried out an industrial attachment in a Five (5) star hotel namely URUBUTO located in Musanze District. The food and beverage Manager deployed him to work in bakery and pastry section in the main kitchen. After reading this scenario try to answer questions below.

- What personal grooming practices should Emmy respect in his working station?
- What are the Personal Protective Equipment (PPE) that Emmy should wear as a pastry chef?
- What are the cleaning procedures that should be respected while cleaning pastry and bakery section?
- Which cleaning methods or techniques should Emmy apply when cleaning pastry and bakery section?

Key Facts 1.1a: Checking personal grooming for pastry chef and kitchen safety

- **Introduction to personal grooming**

- ✓ **Definition of key terms:**

- ✚ **Personal grooming:** refers to the practice of maintaining cleanliness, hygiene, and a neat appearance for oneself. It involves a range of habits and activities that enhance physical presentation and personal care.

- ✚ **Grooming:** is typically defined as activities that include caring for one's appearance and well-being. It is the art of maintaining parts of the body like the face, hair, nails, skin, and so on. Humans are not the only species that practice grooming; most animals have their methods of grooming.

✓ **The importance of personal grooming for a chef**

- ✚ It shows professionalism at the workplace. In a workplace, the code of conduct and appearance is established as formal, neat, and respectful. When you take the time to groom yourself, it simply shows that you are professional and should be taken seriously.
- ✚ It makes you adaptable to any environment. A complete grooming routine will help you make a good first impression and win acceptance quickly.
- ✚ It gives you respect. If you respect yourself enough to learn the best ways to groom and look presentable, then others will have no choice but to respect you too. This does not mean you have to be flashy to be noticed and respected.
- ✚ It gives you self-confidence. Self-confidence is described as the belief in oneself. It is self-assurance in your capabilities, judgment, and power. Self-confidence is the end product or result of a healthy self-esteem.

• **Personal hygiene practices**

✓ **Hand Hygiene**

- ✚ Wash hands thoroughly with soap and warm water before handling food, after touching raw meat, and after using the restroom.
- ✚ Dry hands with disposable paper towels or air dryers; avoid using shared towels.

✓ **Health & Illness**

- ✚ Do not handle food if you're sick with symptoms like vomiting, diarrhea, fever, or respiratory illness.
- ✚ Report any illnesses or injuries to supervisors, and refrain from food prep until cleared by a doctor.
- ✚ Cover cuts and wounds with waterproof bandages and gloves.

✓ **Nail and Hair Care**

- ✚ Keep nails trimmed and clean; avoid nail polish or artificial nails.
- ✚ Tie back long hair to keep it from contaminating food.

✓ **Glove Use**

- ✚ Wear disposable gloves when handling ready-to-eat food, especially if you have cuts or wounds.
- ✚ Change gloves frequently, especially after touching raw ingredients, switching tasks, or when gloves become damaged.
- ✚ Wash hands before and after using gloves.

✓ **Proper Attire**

- ✚ Wear clean clothing and aprons specifically for the kitchen.
- ✚ Use hair restraints like hats or hairnets to prevent hair from falling into food
- ✚ Avoid wearing jewelry (rings, bracelets, watches) as they can harbor bacteria and contaminate food. Use closed-toe shoes with slip-resistant soles to protect feet and prevent accidents.¹

• **Personal Protective Equipment for pastry chef**

✓ **Why PPE?**

- ✚ Wearing clean, hygienic kitchen clothing is a legal requirement when you work with food.
- ✚ Your uniform will protect you from hot liquids and other dangers you may come into contact with in the kitchen.
- ✚ You will need a clean uniform every day and must change it if it gets dirty or stained.
- ✚ Clean clothing is important to prevent the transfer of bacteria from dirty clothing to food.
- ✚ A clean uniform also promotes a professional image; it gives a visible sign of cleanliness and good hygiene standards.

¹ <https://blog.foodsafedrains.com/kitchen-sanitation-rules?>

Personal Protective Equipment for pastry chef		
Name	Image	Use of the tools and equipment
Chef hat		The chef hat is classic French cooking hat or “toque blanche” is literally translated as “white hat”. They serve to keep hair out of your food and sweat off your face food and sat off your face
Necktie		The chef neckerchief absorbs sweat from your neck.
Chef Jacket		Chef Jackets are an important part of the Chef Uniform. Because your chef jacket is traditionally double breasted, you are protected against hot spills, splatters, burns, and other kitchen mishaps.
Apron		The Chef Apron is a chef uniform essential. It serves as an extra barrier against hot splashes, hot foods, and other kitchen dangers.
Trousers/Skirt		Chef pant are often baggy with elastic waistbands and odd patterns, and are absolutely essential in protecting chefs.

² <https://www.hickitchen.com/02300-hat-chef-s>

Chef Shoes		Sturdy, comfortable, anti-slip Chef Shoes are a chef uniform essential.
Masks		Helps prevent cross-contamination, especially when handling delicate pastry ingredients like dough or icing.
Disposable Gloves		Ensures hygiene when handling ready-to-eat items like frosting or delicate pastry decorations. ³



Activity 2: Guided Practice



Task 3:

Referring to the scenario in activity 1, before starting any work:

- Demonstrate personal grooming practices that pastry chefs should maintain to ensure hygiene in the kitchen?
- How can you ensure safety during the cleaning process to prevent slips, chemical exposure, or equipment damage?
- Show the steps involved in cleaning kitchen tools and equipment systematically?
- Categorize cleaning products or agents are appropriate for cleaning pastry kitchen surfaces and equipment? Provide examples for each type.

³<https://kitchen.services/list-of-personal-protective-equipment-in-the-commercial-kitchen/>

Key Facts 1.1b: Pastry kitchen hygiene and safety

- **Cleaning tools and equipment**

- ✓ **Cleaning equipment**

- ✚ Wet/Dry vacuums: Used for cleaning up wet spills or dry debris in kitchens.
 - ✚ Floor scrubbers: Used for quickly cleaning up dry debris from floors and corners.
 - ✚ Steam cleaners: Used to sanitize surfaces with high-temperature steam, removing dirt, grease, and bacteria without chemicals.
 - ✚ Vacuum cleaners: Used for quickly cleaning up dry debris from floors and corners.
 - ✚ Steam cleaners: Used to sanitize surfaces with high-temperature steam, removing dirt, grease, and bacteria without chemicals.

- ✓ **Cleaning Tools**

- ✚ Brooms and dustpans: Used for sweeping up dry debris like crumbs, dirt, and food particles from the floor.
 - ✚ Mops and buckets: Used for cleaning kitchen floors to remove dirt, spills, and grease.
 - ✚ Spray bottles: Used to apply cleaning solutions, sanitizers, and disinfectants to surfaces.
 - ✚ Garbage bins: Collect and separate waste materials for disposal or recycling.
 - ✚ Oven cleaners: Used for cleaning the inside of ovens, removing burnt-on food and grease.
 - ✚ Rubber gloves: Maintaining cleanliness, preventing contamination, and protecting both food handlers and the food being prepared.
 - ✚ Cobweb brush: A is used for cleaning kitchen ceilings, corners, vents and high shelves where cobwebs often accumulate.
 - ✚ Hard brush: Used for cleaning hard surface to remove debris

✚ Scouring pads: Used for removing tough, stuck-on food from pots, pans, and grills.

- **Cleaning products / agents**

- ✓ Detergents: Used to remove dirt, grease, and food residue from surfaces, cookware, and utensils.
- ✓ Degreasers: Used for cutting through grease, oils, and fats on stovetops, ovens, hoods, and grills.
- ✓ Sanitizers: Used to kill bacteria, viruses, and other microorganisms on food-contact surfaces like countertops, utensils, and cutting boards.
- ✓ Disinfectants: Used to kill a wide range of microorganisms on non-food-contact surfaces like floors, walls, and trash cans.
- ✓ Abrasive cleaners: Used to scrub surfaces to remove tough stains, baked-on food, and grime from cookware, sinks, and countertops.
- ✓ Glass cleaners: Used for cleaning glass surfaces, such as windows, display cases, and oven doors.
- ✓ Oven cleaners: Used to remove burnt-on food and grease from oven interiors and racks.
- ✓ Floor cleaners: Used for mopping and cleaning kitchen floors to remove grease, dirt, and spills.
- ✓ Bleach (Chlorine-Based): Used as a disinfectant to kill bacteria and mold, and as a whitening agent for cutting boards and surfaces.
- ✓ Enzyme-Based cleaners: Used for breaking down organic materials like fats, proteins, and starches on surfaces, drains, and equipment.
- ✓ Wood surface cleaners: Used to clean and maintain wooden cutting boards and countertops.⁴

- **Cleaning procedures**

Effective kitchen cleaning procedures are critical for maintaining hygiene, preventing cross-contamination, and ensuring a safe environment for food preparation.

✓ **A step-by-step guide on standard cleaning procedures in a kitchen:**

 Prepare for cleaning by:

- Remove all food items and utensils from the area being cleaned to avoid contamination.
- Wear appropriate PPE (gloves, apron, hairnet, etc.) to protect yourself and prevent contamination.
- Gather cleaning tools and agents, including cloths, sponges, disinfectants, detergents, and sanitizers.

 Cleaning Surfaces (Counters, Tables, and Workstations) by:

- Use a brush, cloth, or scraper to remove any leftover food particles or debris from the surface.
- Apply a food-safe detergent solution to the surface and scrub with a sponge or cloth to remove grease, stains, and dirt.
- Use clean water to rinse off any soap residue to prevent it from affecting food.
- Apply a food-safe sanitizer to disinfect the surface and kill any remaining bacteria.
- Allow to air-dry or use clean, disposable towels to dry the surface.

 Cleaning Cooking Equipment (Ovens, Stoves, and Grills) by:

- Ensuring that the equipment is turned off and has cooled before cleaning.
- Take out racks, trays, or grills and soak them in a sink filled with warm water and detergent.
- Use a degreaser or an oven cleaner to break down tough grease and food residue. Use a scrub brush or scouring pad for baked-on grime.
- Wipe the surfaces with a damp cloth to remove any leftover cleaning solution.
- Spray sanitizer on food-contact surfaces.
- Wipe down knobs, handles, and control panels with a damp cloth and mild detergent, then sanitize.

 Dishwashing (Utensils, Dishes, Pots, and Pans) by:

- Remove food scraps from dishes and soak items with stubborn stains in warm water and detergent.
- Wash dishes in warm, soapy water using a sponge or brush. Use hot water for better grease removal.
- Load dishes, utensils, and pans into the dishwasher, ensuring there is enough space between items for water to reach.
- Ensure dishes are rinsed thoroughly in clean water to remove detergent.
- Use hot water (at least 170°F/77°C) in a dishwasher or dip in a sanitizer solution for manual washing.
- Place clean dishes in a dish rack to air-dry. Avoid towel drying, as it can reintroduce bacteria.

 Cleaning Floor by:

- Remove loose debris, food particles, and dirt from the kitchen floor.
- Mop the floor with a solution of warm water and a floor detergent to remove grease and stains. Use a mop bucket with a wringer to avoid excess water.
- After mopping, use a sanitizer solution to disinfect high-traffic areas and food prep zones.
- Allow the floor to air-dry or use a dry mop to prevent slips and falls.

 Cleaning Sinks

- Clear out any remaining food debris or dishwashing utensils.
- Use a scouring pad or brush to scrub the sink with dish soap or a cleaner to remove grease and stains.
- Use clean water to rinse off all cleaning agents.
- Apply a sanitizer to kill any remaining bacteria and let it air-dry.

 Cleaning Refrigerators and Freezers by:

- Remove all food items and shelves/drawers for cleaning.

- Wash the shelves and drawers with warm, soapy water. Rinse and dry thoroughly before placing them back.
- Use a mild detergent or a solution of vinegar and water to clean the inside surfaces of the refrigerator and freezer.
- Use a clean, damp cloth to wipe off soap residue, then dry the surfaces with a clean cloth.
- Apply a food-safe sanitizer to food-contact surfaces.
- Wipe down handles, doors, and control panels.

 Cleaning Cutting Boards and Utensils by:

- Scrape off any food remnants.
- Scrub the board and utensils thoroughly with hot, soapy water.
- Soak in a sanitizer solution or run through the dishwasher.
- Rinse thoroughly and allow to air-dry completely before storage.

 Garbage Disposal and Trash Cans by:

- Remove trash as needed to avoid odors and bacteria buildup.
- Wash trash bins with detergent and hot water. Rinse thoroughly and let them air-dry.
- Apply a disinfectant to kill germs and reduce odor.
- Always use trash can liners to prevent food residue from sticking to the bin.

 Cleaning Ventilation Hoods by:

- Ensure that ventilation systems and exhaust fans are turned off.
- Take out removable filters and soak them in warm, soapy water to remove grease.
- Clean the exterior and interior surfaces of the hood with a degreaser.
- Rinse with water, dry thoroughly, and sanitize if necessary.

 Cleaning Small Appliances (Blenders, Mixers, Coffee Machines) by:

- Ensure that appliances are off and unplugged before cleaning.
- Remove detachable parts like blender jars, mixing bowls, and blades.
- Clean detachable parts with warm, soapy water, and rinse well.

- Use a damp cloth with mild detergent to clean the exterior surfaces of the appliances.
- Once dry, reassemble the parts and sanitize surfaces if necessary.
- ✚ End-of-Day Cleaning Routine involve:
 - Wipe all surfaces with a clean cloth and sanitizer.
 - Remove and replace all garbage bags.
 - Sweep and mop the kitchen floor, and make sure it is dry before closing.
 - Ensure all equipment is turned off, cleaned, and ready for the next day.⁵
- **Cleaning methods /techniques**

Kitchen cleaning methods and techniques involve specific procedures and approaches that help maintain a hygienic and organized space.

 - ✓ **The cleaning methods and techniques in a kitchen setting:**
 - ✚ Manual Cleaning: This involves cleaning surfaces, equipment, and utensils by hand using cleaning agents, water, and tools like sponges, brushes, and cloths.
 - ✚ Soaking: is used for heavily soiled items like pans, pots, and utensils to loosen food residues and baked-on grease.
 - ✚ Two- or Three-Sink Method: This method is often used in commercial kitchens for washing, rinsing, and sanitizing dishes and utensils.
 - ✚ Spray and Wipe: This method is used for cleaning surfaces such as counters, tabletops, and stovetops.
 - ✚ Degreasing: is essential for removing oil, grease, and fat buildup on kitchen surfaces like stoves, ovens, and grills.
 - ✚ Disinfecting and sanitizing: Used to kill bacteria, viruses, and other microorganisms on kitchen surfaces and equipment to ensure food safety.
 - ✚ Scraping and pre-rinsing: This technique is used before washing dishes to remove large food particles and prevent clogging of the sink or dishwasher.
 - ✚ Mopping: Used for cleaning kitchen floors, particularly in high-traffic areas.
 - ✚ Polishing: is used to maintain the shine of surfaces like stainless steel, glass, and wood.

- ✚ Vacuuming: is used to remove dry debris such as crumbs and dust from kitchen floors and corners.
- ✚ Pressure washing: is used for deep cleaning in commercial kitchens, especially for walls, floors, and large equipment.
- ✚ Steam cleaning: uses high-temperature steam to disinfect surfaces, remove grease, and sanitize without chemicals.
- ✚ Deep cleaning: involves a thorough and comprehensive cleaning of the entire kitchen, including hard-to-reach areas and equipment that may not be cleaned daily.
- ✚ Cleaning with enzymatic cleaners: use enzymes to break down organic material like fats, proteins, and starches.⁶

- **Kitchen safety measures**

Kitchen safety measures are essential for preventing accidents, injuries, and foodborne illnesses in both residential and commercial kitchens.

- ✓ **Safety practices to implement.**

- ✚ **Personal hygiene**

- Always wash hands with soap and water before and after handling food, especially raw meat, poultry, or seafood.
- Use clean, fitted clothing and avoid loose sleeves that could catch fire or get caught in equipment.
- Tie back long hair and wear hairnets or caps to prevent hair from contaminating food.
- Use gloves when handling food, especially when dealing with raw meat or allergens, and change gloves frequently.

- ✚ **Safe food handling**

- Use separate cutting boards and utensils for raw meat, poultry, and seafood to prevent cross-contamination.
- Keep perishable foods refrigerated and follow FIFO (First In, First Out) practices to use older products first.

- Regularly check and discard expired food items to prevent foodborne illness.

Equipment safety

- Check appliances and tools for damage or malfunction to prevent accidents.
- Follow the manufacturer's instructions for using kitchen equipment like knives, mixers, and food processors.
- A sharp knife is safer than a dull one, as it requires less force and reduces the risk of slipping.

Fire safety

- Ensure that fire extinguishers are accessible and appropriate for kitchen fires (Class K for grease fires).
- Familiarize yourself with the PASS technique (Pull, Aim, Squeeze, and Sweep).
- Keep flammable materials (like paper towels and dishcloths) away from heat sources.
- Always turn off stoves, ovens, and other appliances when not in use.

Chemical safety

- Keep cleaning supplies and chemicals in a designated area away from food preparation areas.
- Ensure all cleaning agents are properly labeled to avoid confusion.
- Follow the instructions on the labels for use and disposal, and wear gloves and masks if necessary.

Prevent slips and falls

- Immediately clean up spills and wet areas to prevent slipping.
- Place non-slip mats in areas prone to spills (like near sinks and dishwashing stations).
- Ensure that walkways and work areas are free of clutter and equipment.

Temperature control

- Always check the internal temperature of cooked foods to ensure they reach safe levels (e.g., poultry at 165°F/74°C).
- Do not leave perishable foods out for more than 2 hours (1 hour if the temperature is above 90°F/32°C).
- Keep refrigerated foods at or below 40°F (4°C) and hot foods at or above 140°F (60°C).

Emergency preparedness

- Keep a well-stocked first aid kit accessible in the kitchen.
- Familiarize yourself with emergency contact numbers and procedures for fire, poison control, or medical emergencies.
- Have a plan for emergencies, including evacuation routes and procedures for handling burns or cuts.

Training and awareness

- Provide regular training on kitchen safety practices, food handling, and emergency procedures for all kitchen staff.
- Encourage a culture of safety where staff members feel comfortable reporting hazards or unsafe practices.
- Perform periodic safety inspections to identify and address potential hazards.⁷



Activity 3: Application



Task 4:

Read the following scenario and answer the question that follow:

You are about to start your shift as a pastry chef in a professional kitchen, demonstrate your personal hygiene to meet industry standards before handling food. Consider your attire, PPE and personal grooming.

Topic 1.2: Selection of advanced bread and pastry tools and equipment



Activity 1: Problem Solving



Task 5:

Read the following scenario and answer the questions that follow:

As a professional in pastry and bakery products, you are hired to train URUBUTO HOTEL staff about using pastry and bakery tools and equipment, and maintenance of tools and equipment.

- Classify tools used for preparing advanced pastry and bakery products
- Differentiate cooking equipment from processing equipment
- Describe the maintenance of tools and equipment for pastry and bakery section.

Key Facts 1.2: Selection of advanced bread and pastry tools and equipment

- **Introduction to advanced bread and pastry products**

- ✓ **Advanced bread and pastry products** represent the pinnacle of baking artistry, combining technical expertise with creativity. These products often require precision, innovative techniques, and a deep understanding of ingredients and processes. They are characterized by their complex flavors, unique textures, and sophisticated presentations, appealing to both the palate and the eye. Types of advanced bread and pastry equipment and tools

Category of tools and equipment	Image	Use of the tools and equipment
 Range tops/ stove		Are essential kitchen appliances used for cooking food, and they come in various types, styles, and configurations to suit different cooking methods and preferences.

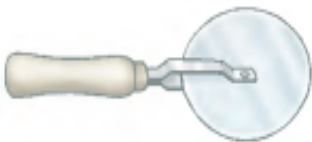
 Oven		Is an essential kitchen appliance designed specifically for baking a variety of foods, including bread, pastries, cakes, cookies, and casseroles.
 Deep fryer		Is a kitchen appliance designed to cook food by submerging it in hot oil.
 Proving machine		Also known as a dough proofer or fermentation cabinet, is a specialized appliance used in baking to provide a controlled environment for proofing dough.
 Mixers		Vertical mixers are important and versatile tools for many kinds of food mixing and processing jobs, both in the bakeshop and in the kitchen.

 Grinder		used to process food into finer textures or specific consistencies.
 Dough sheeter		A sheeter rolls out portions of dough into sheets of uniform thickness. It consists of a canvas conveyor belt that feeds the dough through a pair of rollers.
 Food processor		is a versatile kitchen appliance designed to simplify and speed up various food preparation tasks. It is equipped with multiple attachments and blades, making it suitable for a wide range of culinary tasks.
 Bread slicer		is a kitchen appliance designed to slice loaves of bread uniformly and efficiently.

 Commercial Blender		Is a heavy-duty kitchen appliance designed for high-volume and intensive tasks in commercial or professional kitchens, such as those in restaurants, cafes, or catering businesses.
 Stainless steel Working tables		In a kitchen is an essential piece of equipment that provides a dedicated, stable, and functional surface for various food preparation tasks.
 Steam tables		Are used primarily to keep food warm, ensuring it remains at safe serving temperatures without compromising its texture or flavor.
 Stainless steel commercial Refrigerator		Is an essential kitchen appliance used for storing food and beverages at low temperatures to preserve freshness and prevent spoilage.

✚ Freezer		Used for preserving food, managing inventory, and supporting efficient operations.
✚ Stainless steel Storing shelves		Are essential for organizing kitchen supplies, ingredients, cookware, and utensils efficiently.
✚ Stainless steel pastry trolley		Also known as a pastry cart or pastry rack, is a specialized piece of equipment used in bakeries, restaurants, and catering operations for storing, transporting, and displaying pastries, cakes, and other baked goods.

✚ Measuring jug		Designed with spouts for pouring liquids; marked with measurement lines.
✚ Measuring cups		Used for measuring dry ingredients like flour and sugar.
✚ Measuring spoons		used to measure small and precise quantities of both liquid and dry ingredients.
✚ Icing spatulas		Flat spatulas used for spreading icing and frosting on cakes.
✚ Digital scale		For weighing ingredients accurately, essential for precise baking.

✚ Pastry Brush		Used for applying egg washes, glazes, and butter to pastries and bread.
✚ Pastry wheel		is a versatile kitchen tool primarily used in baking and pastry making, is designed to cut dough quickly and accurately.
✚ Sifter/ sieve		Used for sifting flour and other dry ingredients and for puréeing soft foods
✚ Piping Bags ✚ and Nozzles		Used for decorating cakes and pastries or filling them with cream or custard.
✚ Whisk		Used for mixing dry ingredients or whisking eggs and creams.
✚ Spatula		Rubber or silicone spatulas are ideal for folding ingredients together and scraping bowls clean.

✚ Bread Knife		A serrated knife specifically designed for slicing bread without crushing it.
✚ Rolling pin		Used to roll out dough to the desired thickness; available in various styles (traditional, French, tapered).
✚ Baking tins		used for cooking and baking a wide variety of dishes like breads, cakes, and loaves
✚ Dough scraper		Used to handle dough and keep work surfaces clean.
✚ Oven thermometer		is a handy tool that helps monitor and ensure the accuracy of your oven's temperature

 Candy thermometer		Also known as a sugar thermometer, is a specialized tool used to measure the temperature of hot liquids, particularly in candy-making and other culinary processes requiring precise heat control.⁸
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✓ **Measuring tools and equipment**

Name of tool or equipment	Description	Use of the tools and equipment
 Dry Measuring Cups	These come in various sizes (e.g., 1 cup, 1/2 cup, 1/3 cup, 1/4 cup)	Are designed for measuring dry ingredients like flour, sugar, and cocoa powder. They are filled to the top and leveled off for accurate measurement.
 Liquid Measuring Cups	Common sizes include 1 cup, 2 cups, and 4 cups. These are usually transparent, with measurement markings on the side, and often have a spout for easy pouring.	They are used for measuring liquids like milk, water, oil, and cream.
 Measuring Spoons	Standard sizes include 1 tablespoon (tbsp), 1 teaspoon (tsp), 1/2 teaspoon, 1/4 teaspoon and 1/8 tsp	Used for both dry and liquid ingredients in small quantities, such as baking powder, spices, and vanilla extract.

⁸ <https://jingsourcing.com/p/b14-baking-tools-and-equipment-with-names-and-pictures/>

 Digital Kitchen Scale	Weighing ingredients by weight (grams or ounces) is the most accurate method, especially for flour, sugar, and butter.	A digital kitchen scale is essential in professional pastry kitchens, as it eliminates variations caused by volume measurements and it is used to weigh ingredients accurately.
 Instant-Read Thermometer	It ensures ingredients are at the right temperature to achieve the desired results.	Used for checking the temperature of liquids (like milk for yeast doughs) and cooked sugar (for caramel or candy).
 Candy Thermometer	It clips to the side of a pot to give continuous temperature readings.	Often used in pastry to measure sugar syrup temperatures for tasks like making caramel, candy, or Italian meringue.
 Oven Thermometer	Accurate oven temperature is essential for consistent pastry results.	An oven thermometer is placed inside the oven to ensure the correct temperature, as many ovens have temperature discrepancies.
 Pastry Ruler	also known as straight-edge ruler	Useful for measuring dough thickness and cutting even strips of pastry dough for things like lattice crusts or braided decorations.
 Measuring Jug with Marked Increments	Some jugs have markings for both metric (milliliters) and imperial (cups and ounces) measurements.	Is essential for accurately measuring larger quantities of liquids like water or milk.
 Dough Dividers or Portioning Scales	For accurately dividing dough into equal portions, these tools are used,	Dough dividers cut the dough into equal parts, and portioning

	particularly in professional pastry settings.	scales ensure each piece is of the same weight. ⁹
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✓ **Advanced bread and pastry Tools and equipment maintenance.**

Proper maintenance of kitchen tools and equipment is essential to ensure their longevity, efficiency, and safety. Regular upkeep not only keeps your kitchen running smoothly but also helps maintain food hygiene. Maintenance of advanced and pastry tools and equipment involve:

 Cleaning

- Clean tools and equipment after each use to prevent food residue build up, which can harbour bacteria.
- Use non-abrasive cleaners and sponges for delicate surfaces to avoid scratches. For stainless steel, a mixture of vinegar and water can be effective.
- Check if your tools are dishwasher safe; this can save time and effort. However, hand-washing is often better for the longevity of certain tools.

 Drying

- Always dry tools and equipment thoroughly after washing to prevent rust, especially for metal items.
- Don't soak wooden tools in water, as this can cause them to crack or warp.

 Inspection

- Regularly inspect equipment for signs of wear, damage, or rust. This includes checking cords on electrical appliances, cutting edges on knives, and seals on food storage containers.
- Periodically check and tighten screws or parts on equipment to ensure they are secure.

 Sharpening and Maintenance

- Keep knives sharp using a whetstone, honing steel, or knife sharpener. A sharp knife is safer and more effective.

⁹ <https://ilmish.com/kitchen-utensils-name-vocabulary/?>

- Occasionally oil wooden utensils and cutting boards with food-safe mineral oil to prevent drying and cracking.
- Follow the manufacturer's guidelines for appliance maintenance, including replacing filters in air fryers or cleaning the heating elements in ovens.



Storage

- Store tools in a clean, dry area. Use drawer organizers for small tools and keep heavier equipment in easily accessible places.
- Organize your kitchen space to avoid clutter, which can lead to accidents and make tools harder to find.



Appliance Care

- For refrigerators and Freezers Clean spills immediately, check seals for leaks, and defrost as necessary.
- Clean the oven regularly using appropriate cleaners. Consider using self-cleaning features if available.
- For microwaves wipe down the interior regularly and cover food when cooking to prevent splatter.



Safety

- Regularly inspect electrical cords for damage. Replace any frayed or damaged cords immediately to avoid electrical hazards.
- Follow manufacturer guidelines for using tools and equipment to prevent accidents and damage.
- Keep a fire extinguisher in the kitchen and know how to use it, especially if you're using high-heat appliances.¹⁰



Activity 2: Guided Practice



Task 6:

Referring to the scenario in Task 5, answer the following questions.

- a. What differentiates advanced bread and pastry from standard bread and pastry?
- b. Demonstrate the safe handling and operation of ovens.
- c. How can you correctly set up and operate a blender.
- d. How would you organize and store baked products using holding and storage equipment?
- e. Can you demonstrate the correct method of measuring ingredients for accuracy and consistency?
- f. Can you demonstrate the proper use of a dough mixer or pastry cutter for advanced preparation techniques?



Activity 3: Application



Task 7:

Read and perform the following activity

You are tasked with baking a batch of artisan sourdough bread for a café. Go to the bakery and pastry kitchen, select the right tools and equipment for baking and proving the bread.



Formative Assessment.

1. Which of the following is cooking equipment used in advanced bread preparation?
 - a. Oven
 - b. Steam table
 - c. Food processor
 - d. Whisk
2. Which one among listed equipment is best for holding finished breads with cold holding?
 - a. Food thermometer
 - b. Refrigerator
 - c. Steam table
 - d. Cutting board
 - e. Mixing bowl
3. Identify personal hygiene practices that should be respected by bakery and pastry chef in His/her working station
4. What are personal protective equipment as well as uniforms of bakery and pastry chef?
5. Identify cleaning tools and equipment we may find in bakery and pastry section
6. What are cleaning products or agents needed for cleaning kitchen area and surface?
7. Highlight cleaning procedure to follow when cleaning kitchen surface and cooking equipment.
8. Discuss on different kitchen safety measures we may follow to work safely and securely in our dairy duties.
9. What are the equipment needed for preparing bakery and pastry products and their use?
10. Select processing equipment needed to prepare a bread.



Points to Remember

- Personal hygiene and grooming, cleanliness of tools and equipment is a key to ensure food safety.
- Proper tool and equipment selection and maintenance are vital.
- Make sure all utensils and equipment are spotlessly clean before use.
- Regularly clean and disinfect things that people often touch, such as taps, Cupboard handles and switches.
- Clean all food preparation surfaces with surface disinfectant spray or wipes
- Immediately after preparing food. For direct food contact surfaces, rinse Thoroughly with water after product has been used.



Self-Reflection

1. Fill in the self-assessment table below to evaluate your knowledge, skills, and attitudes following completion of this unit.
 - a. There are no correct or incorrect responses in this assessment. It serves as a tool for your personal reflection on the acquisition of knowledge, skills, and attitudes during the learning process.
 - b. Consider the following: Do you believe you possess the necessary knowledge, skills, or attitudes to perform the task? To what extent?
 - c. Review the statements provided and indicate your level of knowledge, skills, and attitudes by placing a checkmark in the appropriate column.
 - d. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.

My experience	I do not	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Identify hygiene and food safety principles					
Explain hygiene and food safety principles					
Identify cleaning products , tools and equipment					
Describe essential kitchen safety protocols					
Explain the importance of using PPE					
Apply personal grooming standards					
Maintain equipment handling and safety measures					
Operate equipment safely by adhering to handling guidelines					

My experience	I do not	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Select appropriate tools and equipment based on pastry or bakery recipe.					
Apply food safety and hygiene practices					
Practice hygiene principals by regularly using PPEs					
Exhibit vigilance in monitoring kitchen safety and cleanliness standards					
Show self-confidence when preparing the kitchen environment					
Exhibit tidiness and organized throughout tasks.					
Demonstrate commitment to					

My experience	I do not	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
maintaining personal grooming and hygiene					
Encourage a culture of safety and cleanliness by mentoring team members					
Show teamwork and collaboration spirits.					

1. Fill in the table above and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.
3.	3.	3.

UNIT 2:MAKE ADVANCED BREADS



Unit summary

This unit provides you with the knowledge, skills and attitudes required to make advanced breads. It covers Measuring and weighing advanced bread ingredients, Preparation of advanced bread ingredients, Preparation techniques of advanced bread dough, Shaping of advanced breads, Proving of advanced bread Dough, Baking advanced bread dough.

Self-Assessment: Unit 2

- Referring to the unit illustrations above discuss the following:
 - What do the illustrations show?
 - What do you think this unit is about based on the illustration?
- Fill in and complete the self-assessment table below to assess your level of knowledge, skills and attitudes under this unit.
 - There is no right or wrong way to answer this assessment. It is for your own Reference and self-reflection on the knowledge, skills and attitudes acquisition during the learning process.
 - Think about yourself: do you think you have the knowledge, skills or attitudes to do the task? How well?
 - Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.
 - At the end of this unit, you will assess yourself again.

My experience	I do not have	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Describe baking techniques / methods for advanced breads					
Identify types of advanced breads					
Identify baking time and temperature control					

My experience	I do not have	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Perform pastry arts for advanced breads					
Perform mise en place of ingredients tools and equipment for advanced breads					
Demonstrate portioning skills related to advanced bread.					
Apply baking skills for advanced breads					
Show teamwork and collaboration spirit.					

My experience	I do not have	I know a	I have	I have a lot	I am
Knowledge, skills and attitudes	any experience doing this.	little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Be innovative and creative in presentations of pastry products					
Be tidy and organized throughout tasks					
Show positive work ethics					
Be honest in measuring, portioning and mixing ingredients.					



Key Competencies:

Knowledge	Skills	Attitudes
1. Describe baking techniques / methods for advanced breads	1. Perform pastry arts for advanced breads	1. Show teamwork and collaboration spirit.

Knowledge	Skills	Attitudes
2. Identify types of advanced breads	2. Perform mise en place of ingredients tools and equipment for advanced breads	2. Be innovative and creative in presentations of pastry products
3. Identify baking time and temperature control	3. Demonstrate portioning skills related to advanced bread.	3. Be tidy and organized throughout tasks
	4. Apply baking skills for advanced breads	4. Show positive work ethics
		5. Be honest in measuring, portioning and mixing ingredients.



Discovery activity:



Task 8:

Referring to your experience in preparing bakery products, read and answer the following questions:

- Identify advanced bread you may know
- Describe measuring techniques of ingredients for advanced bread
- Identify measuring tools and equipment for advanced bread
- Identify ingredients for advanced bread
- Describe the steps for preparing bread dough ingredients
- Describe techniques for preparing advanced breads
- Describe techniques for portioning and shaping advanced breads
- Describe techniques for proving advanced breads
- Describe techniques for baking advanced breads
- Describe techniques for cooling advanced breads

Topic 2.1: Preparation of sour bread



Activity 1: Problem Solving



Task 9:

Read the following scenario and answer the questions that follow

Urumuri hotel located in Rubavu District has different department. Among these departments one is responsible for preparation of different types of bread. The workers do not know how to prepare sour bread. They ask you to help them prepare the bread like a person who has learned how to prepare it.

- What are the ingredients would you use in preparation of sour bread
- What are the instructions should you respect while you are in preparation of sour bread?
- Explain clearly to them the shaping techniques for sour dough
- Describe the measuring techniques of ingredients of sour bread
- Discuss for them the essential conditions for successful proofing of sourdough bread
- Elaborate the techniques the can use to cool sourdough bread effectively

Key Facts: 2.1: Preparation of sour bread

- **Introduction to sour bread**

Sourdough bread making is a traditional, natural process that uses a fermented dough starter made from flour and water to naturally leaven the bread. The process can be more time-consuming than using commercial yeast, but the results are often worth it, yielding bread with a unique flavor, texture, and nutritional profile.

- ✓ **Ingredients for Sour bread.**

stages	ingredients	Metric measures
Stage 1	Warm water	250 g
	Whole rye flour	250 g
Stage 2	Bread flour	250 g
	Starter from stage 1	500g
Stage 3	Bread four	375g
	Water	190g

	Starter from stage 2	250g
To refresh starter starter as needed	Bread flour	375 g
	Water	190 g
	starter	250 g

✓ **Measuring techniques of ingredients**

Measuring ingredients accurately is crucial in pastry-making, as small variations can significantly impact the texture, flavor, and consistency of the final product.

✚ Dry ingredients: Dry measuring cups and digital scale are typically used for ingredients like flour, sugar, cocoa powder, and similar.

✚ Liquid ingredients: When measuring liquids like water, milk, or oil, place the cup on a flat surface and pour the liquid in. Check the measurement at eye level to ensure accuracy.

✚ Semi-solid ingredients: Like Butter, Shortening, and Peanut Butter, These can be tricky. For butter, cut according to the measurement markings on the wrapper if available. For shortening or peanut butter, press into a dry measuring cup and level it off.

✚ Small Quantities (e.g., spices, baking soda): Use measuring spoons for small amounts of dry or liquid ingredients, like baking powder, salt, or vanilla extract.

✚ Weight-based measurement: Use a digital scale for weighing ingredients for precision, especially for flour, sugar, and butter.

✓ **Instructions/ procedures for making sour bread**

✚ Combine the water and rye flour and mix together.

- Place in a stainless container and cover.
- Let stand at room temperature until the mixture becomes bubbly and fermented and has a noticeable fermented aroma.
- This should take 2 or 3 days.

✚ Mix together the ingredients in stage 2 to make a stiff dough.

- Cover and let stand until well fermented. This may take 1 or 2 days.

✚ Combine the ingredients in stage 3, discarding the leftover starter from the previous step.

- Mix into a stiff dough. Cover and let stand until the starter has fermented and the volume has increased by about half.
- This will probably take at least 1 day, possibly longer, depending on conditions and the strength of the wild yeast.
- ✚ Continue to refresh the starter as in step 3 until it is strong enough to double in volume in 8 to 12 hours.
- The procedure may take about 2 weeks in all. At this point, the starter is ready to use in bread.
- ✚ Refresh the starter at least once a day to keep it healthy and vigorous.
- If this is not possible, refresh the starter, let it ferment for a few hours, then refrigerate, tightly covered, for up to 1 week.
- To return the starter to active use, let it come back to room temperature and refresh it at least once before using in bread.

• **Dough flavoring and stuffing techniques for sour bread**

Flavours sourdough bread involves creating depth and complexity while maintaining the natural tangy flavour characteristic of sourdough.

- ✓ **Techniques and ingredients to enhance the flavour profile of sourdough bread.**

flavouring techniques	Example of ingredients and flavouring way
Incorporate specialty flours	✚ Rye Flour (Adds earthy, nutty, and slightly spicy) ✚ Spelt Flour (Provides a sweet, nutty flavor) ✚ Whole Wheat Flour (Delivers a hearty, complex taste) ✚ Kamut or Einkorn Flour (Adds sweetness and a buttery aroma)
Add mix-ins to the dough	✚ Toasted sunflower seeds, pumpkin seeds, sesame seeds, flaxseeds, or poppy seeds add nuttiness and crunch. ✚ Soak grains (like oats, millet, quinoa) for a chewy texture and enhanced flavor.

	✚ Dried fruits (e.g., cranberries, figs, apricots) add sweetness to balance the sourness. ✚ Walnuts, pecans, or hazelnuts provide a rich, toasty flavor. ✚ Fresh or dried rosemary, thyme, or sage pairs well with the sour profile. ✚ Add spices like cinnamon, cardamom, or caraway for unique twists. ✚ Shredded Parmesan, cheddar, or blue cheese folded into the dough gives an umami boost.
Use specialty liquids	✚ Beer or Cider: Adds malty, fruity notes. ✚ Buttermilk or Yogurt: Increases tanginess and enriches the crumb. ✚ Vegetable Juices: Use beet juice, carrot juice, or spinach purée for natural color and subtle sweetness.
Dust and top the crust	✚ Flour Blends: Dust the dough with a mix of rice flour and wheat flour for a crisp, rustic crust. ✚ Seeds: Sprinkle sesame, poppy, or flaxseeds over the shaped dough for a decorative and flavorful crust. ✚ Salt Flakes: Add coarse sea salt for a savory crunch.
• Shaping techniques for sour dough ✓ Pre-shape: After the bulk fermentation (first rise), turn the dough out onto a lightly floured surface. Gently deflate the dough by pressing it down. ✓ Tuck the edges: Using a bench scraper or your hands, fold the edges of the dough towards the center to create a rough, circular shape.	

- ✓ **Form a round:** Flip the dough over so the seam side is facing down. Use your hands to gently pull the edges underneath and rotate the dough, tightening the surface to create tension.
- ✓ **Rest:** Let the dough rest for about 15-30 minutes to relax and rise slightly.
- ✓ **Final shaping:** Tighten the dough again by rotating and pulling the edges underneath, creating a taut surface. This step is key for good oven spring.

- **Sour dough proving techniques**

The proofing conditions for sourdough bread (sour bread) are critical to achieving the desired texture, flavour, and rise. Proofing is the final fermentation phase before baking, where the dough continues to rise and develop flavours. Here are the essential conditions for successful proofing of sourdough bread:

- ✓ Sourdough dough typically proofs best at a temperature range of **75-80°F (24-27°C)**.
- ✓ When proofing sourdough, it's important to maintain a somewhat **humid environment**, especially when proofing at room temperature.
- ✓ Proofing in the fridge (**at about 40°F/4°C**) for **12-24 hours** enhances the flavour of the sourdough by allowing the wild yeast and lactic acid bacteria to work slowly.

- **Baking techniques for sour bread**

Sourdough bread baking requires specific conditions to achieve its characteristic crust, chewy texture, and tangy flavour.

- ✓ **Baking conditions include:**

- ✚ Preheat the oven to **450-500°F (230-260°C)** for the initial bake, this high heat creates the "oven spring," **allowing the dough to expand and form a crisp crust.**
- ✚ After **15-20 minutes**, reduce the temperature to **400-425°F (200-220°C)** to finish baking without over-browning the crust.
- ✚ **Steam** in the oven keeps the surface of the dough moist during the initial bake, allowing it to expand and develop a shiny, crispy crust.
- ✚ Typically, sourdough bread requires **30-45 minutes of baking**, depending on the size and shape of the loaf.

✚ The bread is fully baked when the internal temperature reaches **200-210°F (93-99°C)**, Use a digital thermometer to check for doneness.

✓ **Cooling techniques of sour bread**

Proper cooling is essential to ensure the crumb of sourdough bread sets correctly and the crust retains its texture. Cooling improperly can lead to a gummy interior or soggy crust.

✚ **How to cool sourdough bread effectively:**

- Transfer the loaf immediately from the baking tray or stone to a wire rack after removing it from the oven.
- Let the bread cool for at least 1-2 hours before slicing. Larger loaves may require up to 3 hours to cool completely.
- Avoid covering the bread with cloth, plastic, or foil while it's still warm, as trapped steam will make the crust soft and soggy.
- Bread needs to cool completely before storage to prevent condensation, which can lead to mold or spoilage.



Activity 2: Guided Practice



Task 10:

Referring to the scenario in task 9, answer the following questions

- a. How would you measure each ingredient accurately to ensure the recipe's consistency?
- b. How would you measure each ingredient accurately to ensure the recipe's consistency?
- c. What steps are involved in combining the ingredients to make the sour bread dough?
- d. How do you determine that the dough has reached the correct consistency during mixing?
- e. What adjustments would you make if the dough appears too dry or too sticky?
- f. What signs indicate that the dough is ready for baking after proving?



Activity 3: Application



Task 11:

Read the following scenario and perform the task that follow

You are a pastry chef at AKEZA Hotel and have been assigned to prepare sourdough bread to be served as part of the breakfast menu. Demonstrate the complete process of preparing sour bread, starting from ingredient selection and preparation to the final cooling stage.

Specifically;

1. Select all required ingredients
2. Measure all required ingredients with accuracy.
3. Prepare the sourdough bread dough by following the correct mixing procedures.
4. Use appropriate flavoring and stuffing techniques to enhance the dough.
5. Shape the sourdough bread into the desired forms while ensuring consistency.
6. Apply proper proving techniques to allow the dough to rise adequately.
7. Bake the sourdough bread using suitable baking techniques and equipment.
8. Use proper cooling techniques to ensure the bread is ready for serving.

Topic 2.2: Prepare gluten free bread



Activity 1: Problem Solving



Task 12:

Read the following scenario and answer the questions that follow

Peter started his internship at FANTASTIC BAKERY, he received a clients who wanted gluten free bread. Chef asked him to prepare that bread.

- Outline the ingredients peter should use in preparation of gluten free bread
- What measuring techniques of Ingredients should he use
- Talk about the procedures for making gluten free bread he should respect in preparation of gluten free bread
- Advise him on what Dough flavoring and stuffing techniques applied for gluten free bread
- Describe to him the measuring techniques of ingredients he should use while you are preparing of gluten free bread
- In few words, explain to peter proving techniques of Gluten free bread
- What are baking techniques should he respect for the preparation of gluten free bread
- What are the cooling techniques that help gluten free bread to be delicious?

Key Facts: 2.2: Preparation of gluten free bread

- **Introduction to gluten free bread**

Gluten-free bread making is both a science and an art. It involves creating bread that mimics the texture, flavor, and structure of traditional wheat-based bread while avoiding gluten (a protein found in wheat, barley, and rye). Whether for medical reasons like celiac disease or lifestyle choices, gluten-free bread has grown in popularity, leading to exciting innovations in recipes and techniques.

- ✓ **Ingredients for gluten free bread.**

stages	ingredients	Metric measures
Stage 1	Warm water instant yeast	350 ml (around 40°C) 7 g (1 packet)

Stage 2	gluten-free all-purpose flour	500 g
	sugar	10 g (2 tsp)
	salt	7 g (1 tsp)
	olive oil	2 tbsp

✓ **Measuring techniques of ingredients.**

Measuring ingredients accurately is crucial in pastry-making, as small variations can significantly impact the texture, flavor, and consistency of the final product.

✚ Dry ingredients: Dry measuring cups and digital scale are typically used for ingredients like flour, sugar, cocoa powder, and similar.

✚ Liquid ingredients: When measuring liquids like water, milk, or oil, place the cup on a flat surface and pour the liquid in. Check the measurement at eye level to ensure accuracy.

✚ Semi-solid ingredients: Like Butter, Shortening, and Peanut Butter, These can be tricky. For butter, cut according to the measurement markings on the wrapper if available. For shortening or peanut butter, press into a dry measuring cup and level it off.

✚ Small Quantities (e.g., spices, baking soda): Use measuring spoons for small amounts of dry or liquid ingredients, like baking powder, salt, or vanilla extract.

✚ Weight-based measurement: Use a digital scale for weighing ingredients for precision, especially for flour, sugar, and butter.

✓ **Instructions/ procedures for making gluten free bread**

✚ In a small bowl, mix the warm water (about 110°F/43°C) with sugar and yeast. Let it sit for about 5-10 minutes until it becomes foamy.

✚ In a large mixing bowl, whisk together the gluten-free flour blend and salt.

✚ Make a well in the center of the dry ingredients.

- Add the foamy yeast mixture, eggs (if using), and olive oil.
- Stir the ingredients together until a sticky dough forms.
- You can use a stand mixer with a paddle attachment for this, as gluten-free dough tends to be wetter and stickier than traditional dough.

- ✚ Transfer the dough to a greased loaf pan.
 - Smooth the top with a spatula or wet hands.
 - Cover the pan loosely with a kitchen towel or plastic wrap and let the dough rise in a warm place for about 45 minutes to 1 hour, or until it has doubled in size.
- ✚ While the dough is rising, preheat the oven to 350°F (175°C).
- ✚ Once the dough has risen, remove the cover and place the loaf in the preheated oven.
 - Bake for 35-45 minutes, or until the top is golden brown and the internal temperature reaches 200-210°F (93-99°C).
 - You can check this using an instant-read thermometer.
- ✚ Remove the bread from the oven and let it cool in the pan for 10 minutes.
 - Then, transfer it to a wire rack to cool completely before slicing.
 - Gluten-free bread can be delicate when warm, so let it fully cool to set the structure.

- **Dough flavoring and stuffing techniques for gluten free bread**

Gluten-free bread often benefits from creative flavouring techniques to enhance its taste and make up for the lack of gluten, which contributes to flavour development in traditional bread. Here are several techniques and ingredients to enhance the flavour profile of your gluten free bread.

Flavouring techniques	Example of ingredients and flavouring way
✚ Use flavourful liquids	○ Replace water with milk, buttermilk, or plant-based milks (like almond, coconut, or oat) for a richer taste. ○ Use vegetable, chicken, or beef stock for savoury bread varieties. ○ Add fruit juices (like apple or orange) for sweeter bread styles.
✚ Incorporate herbs and spices	○ Rosemary, thyme, oregano, basil, or chives add depth.

	○ Garlic powder, onion powder, cumin, paprika, or cinnamon can enhance specific flavour profiles. ○ Use nutmeg, cardamom, or allspice for dessert-style bread.
✚ Add sweeteners	○ Honey, maple syrup, agave nectar, or molasses not only sweeten but also add complexity to the flavour. ○ Mashed bananas, applesauce, or pumpkin puree bring moisture and natural sweetness.
✚ Mix in cheeses	○ Parmesan, pecorino, or aged cheddar for a tangy and umami-rich flavour. ○ Cream cheese or goat cheese for subtle, creamy notes.
✚ Include nuts and seeds	○ Add almond meal, flaxseeds, sesame seeds, or sunflower seeds for flavour and texture. ○ Peanut, almond, or cashew butter can be mixed in for a nutty taste.
✚ Use fermentation or sourdough techniques	○ A gluten-free sourdough starter can develop complex, tangy flavours. ○ Letting the dough rest for longer allows flavours to deepen.
✚ Add fruits and vegetables	○ Raisins, cranberries, or chopped dates for sweetness. ○ Zucchini, carrot, or sweet potato for moisture and earthy flavours.
✚ Enhance with extracts	○ Vanilla or Almond Extract: For sweet breads. ○ Citrus Zest: Lemon, lime, or orange zest for a fresh, aromatic touch.
● Shaping of gluten free bread ✓ Prepare your work surface: Lightly oil or dust your hands and work surface with gluten-free flour to prevent sticking. You can also use parchment paper for easier handling.	

- ✓ **Pre-shape the dough:** Once the dough has gone through its bulk fermentation (first rise), gently turn it out onto the floured or oiled surface. The dough will likely be sticky, so use a bench scraper or spatula to help handle it.
 - ✓ **Form a round shape:** Using your hands, gently fold the edges of the dough toward the center, forming a rough round shape. Gluten-free dough doesn't need the same kind of surface tension as wheat dough, but try to make the loaf relatively even.
 - ✓ **Final shaping:** Once you've formed a round, use your hands or a scraper to gently shape the loaf into a smoother, more defined round by tucking the dough under itself.
 - ✓ **Rest and proof:** Place the dough into a parchment-lined or well-oiled proofing basket or bowl. Cover it with a clean towel and allow it to rise until it has expanded noticeably.
 - ✓ **Bake:** Bake the loaf on a preheated baking stone or sheet, following your recipe's instructions for temperature and time.
- **Gluten free bread proving techniques**

Proofing gluten-free bread requires special attention, as gluten-free dough behaves differently from traditional wheat-based dough. Since gluten-free dough lacks the gluten network to trap gas and support its rise, proofing conditions must be optimized to achieve the best texture, flavour, and structure.

 - ✓ **Conditions for successful proofing of sourdough bread:**
 - ✚ The dough should be proofed at 75-85°F (24-29°C). This is the optimal range for yeast activity and fermentation in gluten-free bread.
 - ✚ To prevent the dough from drying out during proofing, it's best to maintain a humid environment.
 - ✚ You can cover the dough with a damp cloth or plastic wrap, or place it inside a proofing box or a lightly covered container.
 - **Baking techniques for gluten free bread**

Gluten-free bread requires specific baking conditions to compensate for the absence of gluten, which gives traditional bread its structure and elasticity.

✓ **Baking conditions include:**

- ✚ Preheat the oven to 375-425°F (190-220°C). Starting at a higher temperature helps the bread rise quickly before the crust sets.
- ✚ Gluten-free bread typically requires 45-60 minutes of baking, depending on the size and type of loaf.
- ✚ Adding steam to the oven helps prevent the crust from drying out and improves the rise. Place a pan of water or ice cubes in the oven during the first 15 minutes of baking.
- ✚ Gluten-free bread is done when the internal temperature reaches 200-210°F (93-99°C). Use a digital thermometer to check doneness.

• **Cooling techniques for gluten free bread.**

Proper cooling is critical for gluten-free bread to achieve its best texture and flavor. Gluten-free bread often has a higher moisture content than traditional bread, so careful cooling prevents a gummy interior and helps maintain its structure.

✓ **How to cool gluten-free bread effectively:**

- ✚ Transfer the loaf immediately from the baking tray or stone to a wire rack after removing it from the oven.
- ✚ Let the bread cool for at least 1-2 hours, depending on its size and type.
- ✚ Larger loaves or those with higher hydration may require up to 2-3 hours to cool completely.
- ✚ Do not cover the bread with plastic, foil, or cloth immediately after baking. This traps steam and softens the crust.
- ✚ Allow the bread to rest in the pan for 5-10 minutes before transferring it to a wire rack.



Activity 2: Guided Practice



Task 13:

Read the following scenario and answer the questions below:

You are in workshop to do a test of the subject called advanced bakery product preparation and the teacher asked you to make gluten free bread

- How do you ensure that the ingredients used are free from gluten contamination?
- How can you ensure the correct ratios of dry to wet ingredients for gluten-free bread?
- What techniques can you use to ensure even distribution of flavors?
- At what temperature and for how long should you bake the gluten-free bread?
- How do you monitor the bread during baking to ensure even cooking and avoid burning?
- How do you handle the bread to avoid damaging it during the cooling process?



Activity 3: Application



Task 14:

Read the following scenario and perform the task that follow

You are working in the pastry section of URUMURI Hotel located in Rubavu District. A customer who is allergic to gluten protein has requested gluten-free bread for their breakfast, which needs to be served promptly at 5:00 AM. Prepare the gluten-free bread by respecting the entire process, from selecting ingredients to cooling the bread correctly and make sure it meets the customer's dietary needs.

Topic 2.3: Preparation of Challah bread



Activity 1: Problem Solving



Task 15:

Read the following scenario and answer the questions below:

After finishing the level 5 in food and beverage operation, you got a job in hotel where you were going to work with other workers in preparation of bread but those workers were not competent enough like you. Among the breads you were required to prepare was challah bread.

- Enumerate the ingredients you would use for challah bread
- Explain the measuring techniques you would apply for measuring challah bread ingredients
- Talk about the procedures you would follow to make challah bread
- State five (5) shaping techniques you prefer for challah bread

Key Facts: 2.3: Preparation of Challah bread

- Introduction to challah bread**

Challah is a traditional Jewish braided bread, usually made for special occasions such as Shabbat (the Sabbath) and holidays. It's known for its slightly sweet taste, soft and fluffy texture, and golden crust, which comes from brushing the dough with egg wash before baking. Challah is typically made with eggs, water, flour, sugar, and yeast, and it is a pareve bread, meaning it contains no dairy or meat, which allows it to be consumed with any meal in accordance with Jewish dietary laws.

- ✓ **Ingredients for challah bread.**

method	ingredients	Metric measures
✚ (Straight dough method)	Bread flour	500 g
	Water	200 g
	Instant yeast	6 g

	Egg yolks	100 g
	Sugar	38 g
	Malt syrup	2 g
	Salt	10 g
	Vegetable oil	62 g

- **Measuring techniques of ingredients**

Measuring ingredients accurately is crucial in pastry-making, as small variations can significantly impact the texture, flavor, and consistency of the final product.

- ✓ **Dry ingredients:** Dry measuring cups and digital scale are typically used for ingredients like flour, sugar, cocoa powder, and similar.
- ✓ **Liquid ingredients:** When measuring liquids like water, milk, or oil, place the cup on a flat surface and pour the liquid in. Check the measurement at eye level to ensure accuracy.
- ✓ **Semi-solid ingredients:** Like Butter, Shortening, and Peanut Butter, These can be tricky. For butter, cut according to the measurement markings on the wrapper if available. For shortening or peanut butter, press into a dry measuring cup and level it off.
- ✓ **Small quantities (e.g., spices, baking soda):** Use measuring spoons for small amounts of dry or liquid ingredients, like baking powder, salt, or vanilla extract.
- ✓ **Weight-based measurement:** Use a digital scale for weighing ingredients for precision, especially for flour, sugar, and butter.

- **Instructions/ procedures for making Challah bread**

- ✓ In a small bowl, dissolve the sugar (or honey) in warm water and sprinkle the yeast over the top. Let it sit for 5-10 minutes until it becomes foamy. This shows the yeast is active.
- ✓ In a large bowl, whisk together the flour and salt. In a separate bowl, whisk the eggs and oil. Add the yeast mixture to the egg mixture and stir to combine.
- ✓ Gradually add the wet ingredients to the dry ingredients, stirring with a wooden spoon or dough hook until a rough dough forms.

- ✓ Turn the dough out onto a lightly floured surface and knead for 8-10 minutes, or until the dough becomes smooth and elastic. If using a stand mixer, knead on medium speed for about 6-8 minutes. The dough should be slightly sticky but pull away from the sides of the bowl.
- ✓ Place the dough in a greased bowl, cover with plastic wrap or a damp kitchen towel, and let it rise in a warm place for 1 to 1 1/2 hours, or until it doubles in size.
- ✓ Once the dough has risen, punch it down and divide it into equal portions, depending on the braid you want to make (e.g., three strands for a simple braid). 7. Roll each portion into a long rope, then braid the ropes together.
- ✓ Place the braided loaf on a parchment-lined baking sheet, cover it lightly with a kitchen towel, and let it rise for another 30-45 minutes, or until it puffs up.
- ✓ Preheat the oven to 350°F (175°C). 10. In a small bowl, beat the remaining egg with a tablespoon of water to make the egg wash. Brush the loaf generously with the egg wash to give the challah a shiny, golden finish. Optionally, sprinkle sesame seeds or poppy seeds on top. 11. Bake for 25-35 minutes, or until the bread is golden brown and sounds hollow when tapped on the bottom.

- **Dough flavoring and stuffing techniques for challah bread**

Stuffing challah dough can elevate this traditional braided bread into a stunning centerpiece with exciting flavors. Its soft, slightly sweet dough is versatile and works well with both savory and sweet fillings.

- ✓ **Stuffing technique for Challah dough follow these methods:**

- ✚ Braided Loaf with Filling

- When to use: Ideal for creating visually striking loaves with fillings like cinnamon sugar, pesto, or chocolate.
 - How to do it:
 - Divide the dough into strands for braiding.
 - Roll each strand flat with a rolling pin.
 - Spread the filling evenly on each strand, leaving a small border around the edges.

- Roll the strands tightly back into logs, sealing the edges to encase the filling.
- Braid the stuffed strands together as usual.
- Allow to rise and bake.

Rolled Swirl Loaf

- When to use: Perfect for fillings like Nutella, fruit preserves, or savory spreads.
- How to do it:
 - Roll the dough into a large rectangle.
 - Spread the filling evenly over the dough, leaving a border around the edges.
 - Roll the dough tightly into a log, starting from one of the long edges.
 - Place the log seam-side down in a loaf pan or shape into a coil for a round challah.
 - Let it rise and bake.
- **Pocket or Filled Sections**
- **When to use:** Best for individual rolls or loaf sections with chunky fillings like cheese or vegetables.
- **How to do it:**
 - Divide the dough into small portions or loaf sections.
 - Flatten each piece slightly and add a dollop of filling in the center.
 - Fold the edges over the filling and pinch to seal.
 - Shape into balls or incorporate the stuffed sections into a braided loaf.

Layered Ring or Wreath

- **When to use:** Great for festive presentations and layered fillings like cinnamon sugar or herb butter.
- **How to do it:**
 - Roll the dough into a large rectangle and spread the filling.
 - Roll it into a log, then slice it lengthwise to expose the filling layers.
 - Twist the two halves together and shape them into a ring.

- Pinch the ends to seal, let it rise, and bake.

- **Shaping of challah bread**

- ✓ **Prepare the dough:** After your dough has gone through bulk fermentation (first rise), turn it out onto a lightly floured surface and divide the dough into three equal pieces. You can use a scale to ensure even portions.
- ✓ **Roll the dough into strands:** Roll each portion of dough into a long strand. Aim for strands that are about 14-16 inches long. Keep your hands and work surface lightly floured to prevent sticking.
- ✓ **Braid the strands:** Place the three strands parallel to each other. Pinch the tops together to form the starting point of your braid. Begin braiding by crossing the outer strands over the middle one. Alternate sides until you reach the end of the strands.
- ✓ **Pinch and tuck the ends:** Once you've braided the dough, pinch the ends together and tuck them underneath the loaf to create a neat finish.
- ✓ **Proof the dough:** Place the braided dough onto a parchment-lined baking sheet and cover it with a clean towel. Let it rise for 1-1.5 hours, or until it's doubled in size.
- ✓ **Bake:** Once the dough has proofed, brush the loaf with an egg wash (optional for a shiny, golden finish) and bake according to your recipe's instructions.

- **Challah bread proving techniques**

Proofing challah bread requires specific conditions to ensure that the dough rises properly and develops the desired texture and flavour.

- ✓ **Proofing conditions for making challah bread:**

- ✚ Challah dough should ideally be proofed at a warm room temperature of around 75-80°F (24-27°C). This temperature range allows the yeast to ferment effectively and gives the dough the best chance to rise.
- ✚ A slightly humid environment helps keep the dough soft and moist during the proofing process.
- ✚ Use a damp kitchen towel, plastic wrap, or place the dough in a lightly oiled bowl covered with plastic wrap to prevent it from drying out.

- **Baking techniques for challah bread**

Challah bread, with its rich, egg-enriched dough, requires specific baking conditions to achieve its signature golden crust, soft crumb, and slightly sweet flavour.

- ✓ **Baking conditions include:**

- ✚ Standard Temperature: Bake challah at 350-375°F (175-190°C). This moderate temperature ensures the bread bakes evenly without over-browning the crust.

- ✚ Always preheat the oven for at least 20 minutes to ensure even heat distribution.

- Small Braids or Rolls: Bake for 20-25 minutes.

- Standard Loaf: Bake for 25-35 minutes.

- Larger Loaves or Multi-Braided Challahs: Bake for 35-40 minutes.

- ✚ The bread is fully baked when the internal temperature reaches 190-200°F (88-93°C). Use a digital thermometer to ensure doneness, especially for larger loaves.

- ✚ Brush the shaped dough with an egg wash (1 egg beaten with a tablespoon of water or milk) just before baking.

- **Cooling techniques for challah bread.**

Proper cooling of challah bread ensures a soft, fluffy crumb and preserves its shiny, golden crust. Incorrect cooling can lead to a gummy interior or a crust that softens too much.

- ✓ **How to cool sourdough bread effectively:**

- ✚ Transfer the loaf immediately from the baking tray or stone to a wire rack after removing it from the oven.

- ✚ Let the challah cool for at least 45 minutes to 1 hour before slicing. Larger or multi-braided loaves may need up to 90 minutes to cool completely.

- ✚ Do not cover the challah with a towel, plastic wrap, or foil while it is still warm. This traps steam and can make the crust soggy.

- ✚ Use both hands and a spatula to lift the challah when moving it from the baking tray to the cooling rack, especially for larger loaves.

- ✚ Use a thermometer to ensure the bread has reached room temperature, about 95-100°F (35-38°C), before slicing.



Activity 2: Guided Practice



Task 16:

Read the following scenario and answer the questions that follow:

You are working as a baker at AKEZA hotel, you are tasked by the sous chef to prepare challah bread,

- a. What are the essential ingredients for making challah bread?
- b. How do you ensure consistency in measurements when preparing multiple batches?
- c. Demonstrate the steps involved in mixing and kneading the dough for challah bread?
- d. What specific steps would you follow to prepare challah dough according to the recipe? How would you incorporate flavorings or fillings into the dough without disrupting its structure?
- e. What techniques could you use to braid or shape challah bread?
- f. What steps would you take if the bread does not meet the expected quality standards?



Activity 3: Application



Task 17:

Read the following scenario and perform the task that follow

You are working in the pastry section of UMURINZI Hotel and have been tasked with preparing Challah bread for Jewish guests from the RTB Delegation. The bread will be served as part of their breakfast alongside other meals. Prepare challah bread that matches the traditional taste and quality of bread from Israel by carefully following all preparation and baking processes.

Topic 2.4 Preparation of Ciabatta bread



Activity 1: Problem Solving



Task 18:

Read the following scenario and answer the questions that follow

After finishing the level 5 in food and beverage operation, Muneza got a job in hotel where she works with other workers in preparation of bread but those workers are not experienced like her. Among the breads she is required to prepare is the ciabatta bread but she had never prepared it before.

- State the measuring techniques of ingredients for ciabatta bread that she should apply.
- What are the proving techniques muneza should use while preparing ciabatta bread?
- Are there ways muneza can use to streamline the bread-making process while ensuring the quality of the ciabatta? Explain to them.

Key Facts: 2.4 Preparation of Ciabatta bread

- Introduction to Ciabatta bread**

Ciabatta: is an Italian bread known for its rustic appearance, crispy crust, and open crumb structure. It translates to "slipper" in Italian, which refers to the bread's shape. Ciabatta is characterized by its airy texture, chewy crust, and slight nuttiness, making it a popular choice for sandwiches and paninis.

- ✓ **Ingredients for Ciabatta bread.**

Methods	ingredients	Metric measures
 Sponge	○ Bread flour	450 g
	○ Water	480 g
	○ Instant yeast	9 g
	○ Virgin olive oil	20 g
 Dough	○ Salt	13 g
	○ Bread flour	220 g

- **Measuring techniques of Ingredients**

Measuring ingredients accurately is crucial in pastry-making, as small variations can significantly impact the texture, flavor, and consistency of the final product.

- ✓ **Dry ingredients:** Dry measuring cups and digital scale are typically used for ingredients like flour, sugar, cocoa powder, and similar.
- ✓ **Liquid ingredients:** When measuring liquids like water, milk, or oil, place the cup on a flat surface and pour the liquid in. Check the measurement at eye level to ensure accuracy.
- ✓ **Semi-solid ingredients:** Like Butter, Shortening, and Peanut Butter, These can be tricky. For butter, cut according to the measurement markings on the wrapper if available. For shortening or peanut butter, press into a dry measuring cup and level it off.
- ✓ **Small Quantities (e.g., spices, baking soda):** Use measuring spoons for small amounts of dry or liquid ingredients, like baking powder, salt, or vanilla extract.
- ✓ **Weight-based measurement:** Use a digital scale for weighing ingredients for precision, especially for flour, sugar, and butter.

- **Instructions/ procedures for making Ciabatta bread**

- ✓ In a small bowl, mix the warm water with the yeast. Let it sit for about 5-10 minutes until it becomes frothy, indicating the yeast is active.
- ✓ In a large mixing bowl, combine the flour and salt. Make a well in the center and pour in the yeast mixture and olive oil (if using). Stir with a wooden spoon or spatula until a shaggy dough forms. The dough will be sticky and wet, which is typical for ciabatta.
- ✓ Cover the bowl with plastic wrap or a damp cloth and let the dough rise at room temperature for about 1 to 2 hours, or until it has doubled in size.
- ✓ After the dough has risen, lightly flour your work surface. Gently turn the dough out onto the floured surface without deflating it too much. Use your hands to stretch and fold the dough in half, then rotate it 90 degrees and fold it again. This process strengthens the gluten.
- ✓ After the final stretch and fold, let the dough rest for 10-15 minutes. Lightly flour the work surface again, then divide the dough into two equal portions.

Shape each portion into a rectangular loaf, being careful not to deflate it too much.

- ✓ Place the shaped loaves on a parchment-lined baking sheet or a floured couche (a type of cloth used for proofing bread). Cover them loosely with plastic wrap or a damp cloth and let them rise for about 30-45 minutes, or until they have puffed up.
- ✓ Preheat the oven to 475°F (245°C) while the loaves are proofing. Place a baking stone or an inverted baking sheet in the oven to heat up.
- ✓ Once the oven is preheated, carefully transfer the loaves onto the hot baking stone or baking sheet. If you have a spray bottle, you can mist the oven with water to create steam, which helps develop a crispy crust.
- ✓ Bake for 20-25 minutes, or until the loaves are golden brown and sound hollow when tapped on the bottom.
- ✓ Remove the ciabatta loaves from the oven and let them cool on a wire rack before slicing. This allows the interior to set and prevents a gummy texture.

- **Dough flavoring and stuffing techniques for Ciabatta bread**

Stuffing ciabatta bread dough requires special attention due to its high hydration and delicate structure. Ciabatta is known for its open crumb and crisp crust, so the goal is to add fillings while preserving these characteristics.

- ✓ **Stuffing technique for Ciabatta dough follow these methods:**

- ✚ Fold-in method

- When to use: Ideal for small, evenly distributed fillings like herbs, grated cheese, or olives.
 - How to do it:
 - After the first rise, stretch the dough into a rectangle on a well-floured surface.
 - Scatter the filling evenly across the dough.
 - Perform a series of letter folds: fold one-third of the dough over the centre, then fold the other third on top.
 - Repeat folding from the other side to encase the filling completely.
 - Allow the dough to rest for its second rise.

Layer and Roll Method

- When to use: Best for creating swirls or concentrated layers of filling like pesto, tapenade, or soft cheeses.
- How to do it:
 - Gently stretch or press the dough into a flat rectangle on a floured surface.
 - Spread the filling evenly over the dough, leaving a small border.
 - Roll the dough loosely into a log, being careful not to deflate it.
 - Transfer to a baking surface and let it rest before baking.

Pocket method

- When to use: Works well for chunky fillings like roasted vegetables, caramelized onions, or meats.
- How to do it:
 - Divide the dough into portions for individual loaves or rolls.
 - Flatten each portion slightly and place the filling in the centre.
 - Fold the dough over the filling and seal the edges, forming a rough ball or oval.
 - Place seam-side down and proof.

Stuffed flat Ciabatta

- When to use: Suitable for fillings like cheese, garlic, or herbs for a focaccia-style presentation.
- How to do it:
 - Stretch the dough into a thin, flat rectangle.
 - Place the filling over one half of the dough, then fold the other half over to encase the filling.
 - Pinch the edges gently to seal, avoiding deflation.
 - Bake as a flatbread or loaf.

• **Shaping of Ciabatta bread**

- ✓ **Prepare the dough:** After your dough has completed its first fermentation (bulk fermentation), turn it out onto a well-floured surface. Due to the high

hydration, it will be very sticky, so you may need to use a generous amount of flour to prevent it from sticking.

- ✓ **Gently deflate:** Gently deflate the dough by pressing down on it with your fingers, but don't overwork it. You want to preserve the airy bubbles created during fermentation.
- ✓ **Stretch and fold:** Using your bench scraper or floured hands, gently stretch the dough into a rectangle. For traditional ciabatta, the dough should be fairly flat and slightly elongated. Don't worry about making it perfectly uniform.
- ✓ **Fold the dough:** Fold the dough into thirds, like folding a letter. This step is called a "letter fold" and helps to give the dough structure while keeping some of the air pockets intact.
- ✓ **Rest and proof:** Once you've folded the dough, cover it with a damp cloth or plastic wrap and let it rest for about 30 minutes to 1 hour, allowing it to rise again and relax. This will help the dough hold its shape when baking.
- ✓ **Transfer to baking sheet:** After the dough has risen, carefully transfer it to a well-floured or parchment-lined baking sheet, leaving space between the loaves if you're making more than one.
- ✓ **Final proofing:** Let the dough rise a final time, usually for about 30-45 minutes, until it is noticeably puffed up. It won't rise too much, but you should see some expansion.
- ✓ **Bake:** Bake in a preheated oven (typically with steam) until golden brown and the crust is crisp.

- **Ciabatta bread proving techniques**

Proofing ciabatta bread requires specific conditions to allow the dough to rise properly while developing its characteristic open crumb and airy texture. Since ciabatta is a type of Italian bread with a high hydration dough, it behaves differently from more traditional breads, requiring careful attention during the proofing process.

✓ **Proofing conditions for ciabatta bread:**

- ✚ The dough should be proofed at a warm room temperature of around 75-80°F (24-27°C). This temperature range promotes proper fermentation without allowing the dough to rise too quickly.
- ✚ To prevent the dough from forming a dry skin or crust, it's essential to keep the environment humid.
- ✚ You can cover the dough with a damp cloth or plastic wrap during the proofing process to retain moisture.

• **Baking techniques for Ciabatta bread**

Ciabatta bread, known for its rustic appearance, airy crumb, and chewy crust, requires specific baking conditions to achieve its distinctive characteristics.

✓ **Baking conditions include:**

- ✚ Preheat the oven to **450-500°F (230-260°C)** for best results, the high temperature encourages a strong oven spring and helps develop the crusty exterior.
- ✚ **Bake ciabatta for 20-30 minutes**, depending on the size of the loaves.
- ✚ Place a **pan of water or ice cubes in the oven during the first 10-15 minutes of baking**.
- ✚ The bread is fully baked when the internal temperature reaches **205-210°F (96-99°C)**.

• **Cooling techniques for Ciabatta bread.**

Proper cooling of ciabatta bread is essential to maintain its rustic crust and airy, open crumb. Cooling improperly can lead to a gummy interior or a crust that softens excessively.

✓ **How to cool sourdough bread effectively:**

- ✚ Transfer the loaf immediately from the baking tray or stone to a wire rack after removing it from the oven.
- ✚ Let the ciabatta cool for at least 1-2 hours before slicing, depending on the loaf size.
- ✚ Smaller ciabatta rolls may cool in 30-60 minutes.

- ✚ Do not cover warm ciabatta with cloth, plastic, or foil. This traps steam, softening the crust and compromising its rustic texture.
- ✚ Ciabatta's crust is fragile and crumb is light, so handle it gently when transferring from the oven to the rack to avoid compressing the bread.
- ✚ If the crust softens after cooling, reheat the loaf in a preheated oven at 375°F (190°C) for 5-10 minutes to restore its crisp texture. Use both hands and a spatula to lift the challah when moving it from the baking tray to the cooling rack, especially for larger loaves.
- ✚ Use a thermometer to ensure the bread has reached room temperature, about 95-100°F (35-38°C), before slicing.



Activity 2: Guided Practice



Task 19:

Read the following scenario and answer the questions that follow

You work in the bakery and pastry section of a hotel. And you are going to make ciabatta bread to serve the next day for breakfast.

- a. How does accurate measurements affect the outcome of the bread.
- b. Elaborate the steps followed to combine the ingredients and create the dough?
- c. What precautions do you take to avoid overworking the dough while adding flavorings?
- d. What temperature and baking methods are best for Ciabatta bread?
- e. What shaping techniques are appropriate for Ciabatta bread to maintain its rustic, airy structure?
- f. What cooling method is most suitable for Ciabatta bread to retain its crusty exterior?



Activity 3: Application



Task 20:

Read the following scenario and perform the task that follow

You are working as a pastry chef in the bakery section of UMUCYO Hotel, and you have been assigned to prepare ciabatta bread for an Italian-themed dinner event. The bread must have the authentic airy texture and crispy crust characteristic of traditional Italian ciabatta. Prepare the ciabatta bread following all steps, from ingredient selection to baking and cooling accurately to meet the guests' expectations.



Formative Assessment

1. True or false Questions.
 - a. Sourdough bread making is a traditional, natural process that uses a fermented dough starter made from flour and water to naturally leaven the bread
 - b. Measuring ingredients accurately is important in pastry-making
 - c. Digital scale is a one of processing equipment used for weighing ingredients for precision, especially for flour, sugar, and butter
 - d. Flavouring sourdough bread involves creating depth and complexity while maintaining the natural tangy flavour characteristic of sourdough
 - e. Pre-shape, Tuck the edges, form a round, Rest and final shaping are shaping techniques of sour bread.
2. State at least three (3) techniques of proofing sour bread dough
3. What are three (3) main specific ingredients of ciabatta bread?
4. Describe the procedures for making challah bread
5. Explain Measuring techniques of Ingredients for challah bread
6. Steps by steps, talk about the instructions of making ciabatta bread
7. As future baker in a given hotel, prepare a standard free gluten bread
8. What are the common techniques of cooling sour bread after baking?
9. State the flavoring techniques of sour bread

10. One of the following is not involved in techniques for shaping sour dough. Answer by circle.
- a. Pre-shape
 - b. Tuck the edges
 - c. Bending
 - d. Form a round
 - e. Final shaping
11. Ingredients are crucial in the preparation of gluten free bread. so give at least five (5) ingredients of gluten free bread
12. Identify techniques a baker should do in order to enhance flavour of gluten free bread
13. Stuffing challah dough can elevate this traditional braided bread into a stunning centerpiece with exciting flavors so how to braided loaf with filling
14. Discuss about the baking techniques for ciabatta bread
15. Can you give us five (5) liquid ingredients may used as flavouring of gluten free bread?



Points to Remember

- **Selection of tools and equipment:**
 - ✓ Choose appropriate tools and equipment based on type of advanced bread and techniques required to be prepared.
 - ✓ Consider factors such as size, material, and functionality when selecting tools and equipment to ensure efficiency and effectiveness in the kitchen.
- **Selection of ingredients**
 - ✓ Choose fresh, high-quality ingredients for particular bread to enhance flavour, texture, and overall culinary experience.
- **Measurements:** Accurate measuring is crucial in baking. Use measuring cups and spoons for dry ingredients and a liquid measuring cup for liquids. Follow the recipe closely to maintain proper ratios.

- **Mixing Technique:** Depending on the type of bread the mixing technique varies. For example, puff pastry requires layering fat and dough, while shortcrust pastry benefits from minimal mixing to prevent gluten development.
- **Portion Size:** Ensure portion sizes are consistent and appropriate for the bread type.
- **Preparation techniques:** respect all needed stages or steps for preparing particular advanced breads
- **Proving and baking:** respect required temperature and time for proving and baking advanced bread basing on given recipe.
- **Practice and Patience:** Pastry-making can be a skill that improves with practice. Don't be discouraged by initial failures; learn from them and adjust techniques as needed.



Self-Reflection

1. Fill in the self-assessment table below to evaluate your knowledge, skills, and attitudes following completion of this unit.
 - a. There are no correct or incorrect responses in this assessment. It serves as a tool for your personal reflection on the acquisition of knowledge, skills, and attitudes during the learning process.
 - b. Consider the following: Do you believe you possess the necessary knowledge, skills, or attitudes to perform the task? To what extent?
 - c. Review the statements provided and indicate your level of knowledge, skills, and attitudes by placing a checkmark in the appropriate column.
 - d. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.

My experience	I do not	I know a	I have some	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	experience doing this.	of experience with this.	confident in my ability to do this.
Describe baking techniques / methods for advanced breads					
Identify types of advanced breads					
Identify baking time and temperature control					
Perform pastry arts for advanced breads					
Perform mise en place of ingredients tools and equipment for advanced breads					

My experience	I do not	I know a	I have some	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	experience doing this.	of experience with this.	confident in my ability to do this.
Demonstrate portioning skills related to advanced bread.					
Apply baking skills for advanced breads					
Show teamwork and collaboration spirit.					
Be innovative and creative in presentations of pastry products					
Be tidy and organized throughout tasks					
Show positive work ethics					

My experience	I do not	I know a	I have some	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	little about this.	experience doing this.	of experience with this.	confident in my ability to do this.
Be honest in measuring, portioning and mixing ingredients.					

2. Fill in the table above and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.
3.	3.	3.

UNIT 3: MAKE ADVANCED PASTRY PRODUCTS



Unit summary

This unit provides you with the knowledge, skills and attitudes required to the preparation of advanced pastry products. It covers preparation, baking, cooling and decoration of advanced pastry products.

Self-Assessment: Unit 1

1. Referring to the unit illustrations above discuss the following:
 - a. What do the illustrations show?
 - b. What do you think this unit is about based on the illustration?
2. Fill in and complete the self-assessment table below to assess your level of knowledge, skills and attitudes under this unit.
 - a. There is no right or wrong way to answer this assessment. It is for your own Reference and self-reflection on the knowledge, skills and attitudes acquisition during the learning process.
 - b. Think about yourself: do you think you have the knowledge, skills or attitudes to do the task? How well?
 - c. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.
 - d. At the end of this unit, you will assess yourself again.

My experience	I do not	I know	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	a little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Describe baking techniques / methods for some advanced pastry products					
Identify types of advanced pastry products					
Identify baking time and temperature					

My experience	I do not	I know	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	a little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
control for advanced pastry products					
Perform pastry arts for advanced products.					
Perform Mise en place of ingredients tools and equipment for advanced pastry products.					
Apply baking skills for advanced pastry					
Show teamwork and collaboration spirits.					
Be Innovative and Creative in presentations of pastry products					

My experience	I do not	I know	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	a little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Be tidy and organized throughout tasks					
Show positive work ethics					
Be honest in measuring, portioning and mixing ingredients.					



Key Competencies:

Knowledge	Skills	Attitudes
1. Describe baking techniques / methods for some advanced pastry products	1. Perform pastry arts for advanced products.	1. Show teamwork and collaboration spirits.
2. Identify types of advanced pastry products	2. Perform Mise en place of ingredients tools and equipment for advanced pastry products.	2. Be Innovative and Creative in presentations of pastry products

Knowledge	Skills	Attitudes
3. Identify baking time and temperature control for advanced pastry products	3. Apply baking skills for advanced pastry	3. Be tidy and organized throughout tasks
		4. Show positive work ethics
		5. Be honest in measuring, portioning and mixing ingredients.



Discovery activity:



Task 21:

Referring to your experience in preparing advanced pastry products, read and answer the following questions:

- Identify advanced pastry products you may know
- Describe measuring techniques of ingredients for advanced pastry products
- Identify measuring tools and equipment for advanced pastry products
- Identify ingredients for advanced pastry products
- Describe the steps for preparing advanced pastry products ingredients
- Describe techniques for preparing advanced pastry
- Describe techniques for portioning and shaping advanced pastry products
- Describe techniques for proving advanced pastry products
- Describe techniques for baking advanced pastry products
- Describe techniques for cooling advanced pastry products

Topic 3.1: Preparation of custard and cream.



Activity 1: Problem Solving



Task 22:

Read the following scenario and answer questions that follow

After completing her TVET Certificate V, Mahoro got an employment opportunity in one of the best hotels in Rwanda in the foods and beverage department. Her duties include preparing bakery and pastry products. The hotel is expecting to receive a group of guests and among their menu is a variety of bakery products. Mahoro has never prepared pastry products for such a large group of people before. She comes to you for advice.

- Explain to Mahoro the difference between custard and cream pastries?
- Advise her on the preparation techniques for cream caramel?
- Explain to her the ingredients that can be used in preparation of Crème Brulee
- Advise her about the preparation techniques for chocolate mousse

Key Facts 3.1 Preparation of custard and cream

- Introduction to custard and cream**

Custards and creams are essential components in the world of advanced pastry. They serve as the base for many iconic desserts, including tarts, cakes, éclairs, and mousses. These mixtures of milk or cream, eggs, and sugar are often flavored with vanilla, citrus, or other aromatics and are used in a variety of ways, from fillings to toppings.

The distinction between the two is primarily in the texture, consistency, and preparation methods, though both require precision in terms of temperature and technique to achieve the desired results.

✓ **Type of custards and creams**

+ **Description of custards and creams**

Category	Types of Custards	Compositions
○ A custard is a creamy, egg-based mixture that is typically thickened with heat. Custards can be made with different consistencies, from pourable sauces to firm, spoonable fillings.	▪ Crème Anglaise (English Cream)	This is a pourable custard made with egg yolks, sugar, and milk or cream. It's often used as a sauce to accompany desserts like fruit tarts or sponge cakes.
	▪ Crème Pâtissière (Pastry Cream)	This is a thicker custard used as a filling for tarts, éclairs, and pastries like mille-feuille. It is made with milk, egg yolks, sugar, and cornstarch or flour, which acts as a thickener.
	▪ Crème Légère (Light Pastry Cream)	A lighter version of crème pâtissière, this custard is made by folding whipped cream into crème pâtissière, giving it a lighter, airy texture. It's often used in fillings for delicate pastries, such as cream puffs.
	▪ Crème Brûlée	A famous custard dessert made with cream, egg yolks, sugar, and vanilla, which is baked in a water

			bath until set. The top is caramelized with a layer of sugar using a torch, creating a crispy, golden crust.
		Flan (Crème Caramel)	A caramel-flavored custard, baked in a mold and then inverted onto a plate. It is made from eggs, milk, sugar, and vanilla, with caramelized sugar forming the sweet sauce on top.
		Category	Types of cream
Creams are often a bit lighter and less dense than custards, and many are used in the decoration or filling of advanced pastry products. Some creams may or may not use eggs in their preparation, but all are essential for adding richness, texture, and flavor		Crème Chantilly (Whipped Cream)	is simply sweetened whipped cream, often flavored with vanilla. It's used to top desserts, fill cakes, or serve alongside fresh fruit.
		Crème Fraîche	A cultured cream with a slightly tangy flavor, made by fermenting cream with bacterial cultures. It's often used as a topping or in sauces and dressings, and its rich, smooth texture is ideal for desserts like tarts.

	to a wide range of desserts.	▪ Pastry Cream (Crème Pâtissière)	As mentioned, this is a versatile and thick cream used as a filling in pastries and cakes. The base consists of egg yolks, sugar, milk, and starch.
		▪ Crème Mousseline	This is an enriched version of crème pâtissière, made by combining it with butter to create a smooth, fluffy texture. Crème mousseline is used in sophisticated pastries like mille-feuille.
		▪ Crème Diplomat	This is a hybrid of crème pâtissière and crème chantilly. Pastry cream is lightened with whipped cream, making it ideal for filling delicate pastries and cakes.
		▪ Crème au Beurre (Buttercream)	A rich, smooth cream made with butter and sugar, often used as a filling or frosting for cakes. Variations include French buttercream (made with egg yolks and sugar syrup) and Italian buttercream (made with meringue and butter).

✓ **Custards and creams recipes**

✚ **Cream caramel**



○ **Ingredients and measurements**

ingredients	Metric measures
Caramel	
sugar	142g
Custard	
Milk	105 ml
Heavy cream	30 ml
Sugar	50 g
Vanilla beans (optional)	1 each
Eggs	284g

○ **Preparation techniques for Cream caramel**

- To prepare the caramel, add a small amount of the sugar to a medium-hot pan set over medium heat and allow it to melt, then add the remaining sugar in small increments, allowing each addition to fully melt before adding the next.
- Continue this process until all the sugar has been added to the pan, and cook to the desired color.
- Carefully divide the liquid among the bottoms of the ramekins.

○ **Preparation techniques for Custard**

- To prepare the custard, warm the milk and cream and half of the sugar and remove from the heat.

- If using a vanilla bean, split the bean, scrape the seeds from the pod, add both the pod and seeds to the pan, cover, and steep for 15 minutes.
- Combine the eggs and the remaining sugar.
- Temper by gradually adding about one-third of the hot milk and cream, stirring constantly with a whisk.
- Add the remaining hot milk and cream. Do not return to the heat.
- Strain and divide the custard mixture among the prepared ramekins.
- Bake in a water bath at **325°F/163°C** until just set, **20 to 25 minutes**.
- Remove the custards from the water bath and wipe the ramekins dry. Refrigerate until fully chilled.

Crème Brûlée



○ Ingredients and measurements

Ingredients	Metric measures
Heavy cream	960 ml
Granulated sugar	170 g
Salt	pinch
Vanilla beans	1 each
Egg yolks, beaten	156 g
Brûlée sugar blend	142 g
Confectioners' sugar, for dusting	128g

- Preparation techniques for Crème Brûlée
 - Combine the cream, 85 g of the sugar, and the salt in a nonreactive saucepan and bring to a simmer over medium heat, stirring gently with a wooden spoon.
 - Remove from the heat. Split the vanilla bean, scrape the seeds from the pod, add both the pod and seeds to the pan, cover, and steep for 15 minutes.
 - Bring the cream to a boil.
 - Meanwhile, blend the egg yolks with the remaining 85 g sugar. Temper by gradually adding about one-third of the hot cream, stirring constantly with a whisk.
 - Add the remaining hot cream. Strain and ladle into ramekins, filling those three-quarters full.
 - Bake in a water bath at **325°F/163°C** until just set, **20 to 25 minutes**.
 - Remove the custards from the water bath and wipe the ramekins dry. Re-frigerate until fully chilled
 - To finish the crème brûlée, evenly coat each custard's surface with a thin layer (1/16 in/1.5 mm) of brûlée sugar.
 - Use a propane torch to melt and caramelize the sugar.
 - Lightly dust the surface with confectioners' sugar and serve.

Chocolate mousse

- Ingredients and measurements



Ingredients	Metric measures
Heavy cream	900 mL
Dark chocolate, 64%, finely chopped	425 g
Gelatin sheets	3 each
Water, cold	300 ml
Eggs	170 g
Egg yolks	85 g
Sugar	85 g

- Preparation techniques for chocolate mousse
 - Assemble and prepare the desired pastries, containers, or molds that are to be used in the application of the mousse before beginning preparation
 - Whip the cream to soft peaks. Cover and reserve under refrigeration.
 - Melt the chocolate in a bowl over barely simmering water (the bottom of the bowl should not touch the water). Bring the chocolate to 120°F/49°C.
 - Meanwhile, submerge the gelatin sheets in the water and allow them to bloom for about 5 minutes.
 - Combine the eggs, egg yolks, and sugar in a bowl over simmering water, whisking constantly until it reaches 135°F/57°C.
 - Pour the egg and sugar mixture in the mixer and whip on high speed with the whip attachment until light in color and foamy.
 - Meanwhile, strain the gelatin well and melt it over a gentle water bath.
 - Add the melted gelatin to the still-warm egg and sugar mixture and continue to whip until it reaches room temperature, 75°F/24°C.
 - Combine the mixture into the melted chocolate, whisking vigorously
 - Fold in the whipped cream, thoroughly incorporating it.
 - Immediately pipe or spread into prepared pastries or containers.
 - Cover and refrigerate until completely set.

 Panna cotta

- Ingredients and measurements

Ingredients	Metric measures
Gelatin, granulated	14 g
Water	120 ml
Heavy cream	960 ml
Sugar	340 g
Salt	250 g
Buttermilk	900 ml



- Preparation techniques for Panna cotta

- Bloom the gelatin in the water and melt.
- Combine the cream, sugar, and salt in a nonreactive saucepan and heat, stirring, over medium heat to dissolve the sugar; make sure the mixture does not simmer.
- Remove from the heat.
- Add gelatin to the cream mixture, blending well.
- Let the mixture cool to 100°F/38°C and stir in the buttermilk.
- Pour into ramekins.
- Cover tightly and refrigerate for several hours or until set.

✓ **Gluten free cakes**

A gluten-free cake is a cake made without gluten, a protein found in grains such as wheat, barley, rye, and their derivatives. Gluten-free cakes are designed for people with gluten intolerance, celiac disease, or those who choose to avoid gluten for personal or dietary reasons.

🍂 Pumpkin cake (gluten free cake)

- Ingredients and measurements



Ingredients	Metric measures
Eggs	12 each
Sugar	128 g
Vegetable oil	113 g
Pumpkin purée	142 g
Baking soda	28 g
All-purpose flour	227 g
Ground all spice	0.50 g
Ground cinnamon	2 g
Ground nutmeg	0.50 g

- Preparation techniques for Pumpkin cake
 - Coat the loaf pans with a light film of fat and line them with parchment paper.
 - Combine the eggs and sugar and blend on medium speed with the paddle attachment.
 - Slowly add the oil and mix on until incorporated.
 - Add the pumpkin purée and mix until incorporated.
 - Sift together the baking soda, flour, allspice, cinnamon, and nutmeg.
 - Add to the egg mixture and mix just until combined.
 - Scale 1.70 kg of batter into each prepared pan.
 - Bake in a 300°F/149°C convection oven until the center springs back when lightly touched and the surface is a light golden brown, 20 to 30 minutes.
 - Cool in the pan for a few minutes, then unmold onto racks to cool completely.



Activity 2: Guided Practice



Task 23:

Read the following scenario and answer questions that follow

You are one of URUMURI Hotel employees, and you expect to receive a group of people from out of our country. On the Menu of day there are different courses like starters, main course and dessert. On the dessert list there is pumpkin cake and chocolate mousse and you are tasked to prepare those pastry product as dessert

- a. What are the ingredients will you use in preparation of chocolate Mousse?
- b. Precise the preparation techniques for chocolate mousse
- c. Elaborate the measurements for the required ingredients for pumpkin cake and chocolate mousse?
- d. How would you prepare the baking pan to avoid sticking and ensure even baking?
- e. What tools can you use to check if the pumpkin cake is baked to perfection?
- f. How would you present the pumpkin cake attractively for the dessert menu?
- g. Demonstrate the steps for preparing chocolate mousse
- h. What garnishes can you use to enhance the presentation of the chocolate mousse?



Activity 3: Application



Task 24:

Read the following scenario and perform the task that follow

You have received a group of 10 guests who have specifically requested a pumpkin cake made with gluten-free flour, as they are allergic to whole wheat flour. Prepare a pumpkin cake by following the preparation process accurately, starting from selecting the right ingredients to the final cooling and presentation of the cake.

Topic 3.2: Specialty pastries preparation



Activity 1: Problem Solving



Task 25:

Read the following scenario and answer the questions that follow

Peter and Paul went to VIBE hotel for their internship at the end of Level 5, When they arrived, the sous chef ordered them to make specialty pastry products, but they have little experience about advanced pastry preparations. Advise them by:

- Explaining the different types of specialty pastries
- Stating the main ingredients of cheese cake
- Describing to them the preparation techniques for cheese cake?
- Enumerating the step by step preparation process for chocolate brown pastry

Key Facts 3.2: Specialty pastries preparation

- **Introduction to specialty pastries**

Specialty pastries are unique, high-quality baked goods often crafted with a focus on innovative flavors, presentation, or cultural traditions. These pastries can be inspired by regional recipes, use premium ingredients, or include artistic techniques that make them stand out from everyday desserts.

- ✓ **Type of Specialty pastries**



Chocolate cake

- Ingredients and measurement

Ingredients	Metric measures
Sugar	978 g
Cake flour	383 g
Cocoa powder, sifted	213 g
Baking powder	43 g
Baking soda	43 g
Salt	7.50 g
Milk	540 mL
Eggs	638 g
Light corn syrup	170 g



Vanilla extract	45 mL
Butter, soft	638 g

○ Preparation techniques for Chocolate cake

- Coat the pans with a light film of fat and line them with parchment circles.
- Sift together the sugar, flour, cocoa powder, baking powder, baking soda, and salt.
- Combine the milk, eggs, corn syrup, and vanilla.
- Blend the butter with the dry ingredients and half of the milk mixture. Mix with the paddle attachment, starting on low speed and increasing to medium speed and scraping down the bowl periodically, until smooth, 4 minutes.
- Add the remaining milk mixture in 3 additions, mixing for 2 minutes after each addition.
- Scale 680 g batter into each prepared pan.
- Bake at 350°F/177°C until the cake springs back when lightly touched in the center, about 35 minutes.
- Cool the cakes in the pans for a few minutes, then unmold onto racks to cool completely

🌈 Hazelnut sponge cake

○ Ingredients and measurements

Ingredients	Metric measures
Cake flour	312 g
Bread flour	113 g
Ground cinnamon	2 g
Hazelnuts, toasted and finely ground	312 g
Egg yolks	851 g
Confectioners' sugar, sifted	255 g
Vanilla extract	10 mL
Lemon zest, grated	9 g
Salt	14 g
Egg whites	851 g
Granulated sugar	255 g



○ Preparation techniques for Hazelnut sponge cake

- Coat the cake pans with a light film of fat and line them with parchment circles.
- Sift together the cake flour, bread flour, and cinnamon. Combine the hazelnuts with the sifted dry ingredients.
- Whip together the egg yolks, confectioners' sugar, vanilla, lemon zest, and salt on high speed with the whip attachment until thick and light in color, about 5 minutes.
- Whip the egg whites on medium speed with a clean whip attachment until soft peaks form. Gradually add the granulated sugar while continuing to whip until medium peaks form.
- Gently blend one-third of the beaten egg whites into the egg yolk mixture to lighten it to a similar consistency as the beaten egg whites. Gently and quickly fold in the remaining egg whites.
- Gradually fold in the dry ingredients.
- Scale 454 g batter into each prepared cake pan.
- Bake at 350°F/177°C until the center of a cake is firm to the touch, 25 to 30 minutes.
- Cool the cakes in the pans for a few minutes, then unmold onto racks to cool completely.

✚ Cheese cake

○ Ingredients and measurements

Ingredients	Metric measures
Graham cracker crust	851 g
Cream cheese	3.40 kg
Sugar	1.02 kg
Salt	14 g
Eggs	851 g
Egg yolks	85 g
Heavy cream	450 mL
Vanilla extract	45 mL



- Preparation techniques for cheese cake
 - Lightly butter the cake pans and line them with parchment circles.
 - Press 71 g of the crust mixture evenly into the bottom of each pan.
 - Combine the cream cheese, sugar, and salt and mix on medium speed with the paddle attachment, occasionally scraping down the bowl, until the mixture is completely smooth, about 3 minutes.
 - Whisk the eggs and egg yolks together. Add the eggs to the cream cheese mixture in 4 additions, mixing until fully incorporated after each addition and scraping down the bowl as needed.
 - Add the heavy cream and vanilla and mix until fully incorporated.
 - Scale 1.13 kg batter into each prepared pan. Gently tap the pans to release any air bubbles.
 - Bake in a hot water bath at 325°F/163°C until the centers of the cakes are set, about 1 hour 15 minutes.
 - Cool the cakes completely in the pans on racks. Wrap the cakes, in the pans, in plastic wrap and refrigerate overnight to fully set.

Chocolate brown pastry

- Ingredients and measurements

Ingredients	Metric measures
All-purpose flour	190 g
cocoa powder (unsweetened)	45 g
baking powder	1 tsp
baking soda	½ tsp
salt	¼ spn
vegetable oil or melted butter	120 ml
granulated sugar	200 g
large eggs	2
vanilla extract	1 tsp
milk	120 ml
water or hot coffee	120 ml



- Preparation techniques for Chocolate brown pastry

Step 1: Make the Pastry Layers

- Preheat your oven to **350°F (175°C)**.
- Grease and line two 8-inch round cake pans or a rectangular pan.
- In a bowl, sift together flour, cocoa powder, baking powder, baking soda, and salt. Set aside.
- In another large bowl, whisk together sugar, oil (or melted butter), eggs, and vanilla extract until smooth.
- Gradually add the milk, mixing until combined.
- Gradually add the dry ingredients into the wet mixture, mixing gently until combined. Stir in the boiling water or hot coffee. The batter will be thin, which helps create a moist pastry
- Divide the batter evenly into the prepared pans.
- Bake for **25–30 minutes**, or until a toothpick inserted in the centre comes out clean.
- Let the layers cool in the pans for 10 minutes, then transfer to a wire rack to cool completely.

Step 2: Make the Chocolate Ganache

- In a small saucepan, heat the cream until it just begins to simmer. Do not boil.
- Pour the hot cream over the chocolate in a heatproof bowl. Let sit for 2–3 minutes, then stir until smooth and glossy.
- Let the ganache cool to a spreadable consistency.

Step 3: Assemble the Pastry

- Place one pastry layer on a serving plate.
- Spread a layer of ganache evenly over the top.
- Add the second pastry layer and spread ganache over the top and sides.
- Decorate with chocolate shavings, whipped cream, or sprinkles as desired.
- Refrigerate the pastry for 30 minutes to set the ganache.

Chocolate Fudge

○ Ingredients and measurements

Ingredients	Metric measures
Granulated sugar	1000 g
Milk	375 ml
Glucose or corn syrup	125 ml
Butter	125 g
Unsweetened chocolate, chopped fine	155 g
Salt	3 g
Vanilla extract	15g



○ Preparation techniques for Chocolate

Fudge

- Combine the sugar, milk, and glucose in a heavy saucepan. Bring to a boil, stirring constantly, until the sugar is dissolved. See page 256 for guidelines on cooking sugar syrups
- Continue to cook the mixture over moderate heat until the temperature reaches 230°F (110°C). Stir gently and slowly as the mixture cooks, to prevent scorching on the bottom of the pan.
- Add the butter and stir gently until it is blended in.
- Add the chocolate, salt, and vanilla. Stir until the chocolate is melted and blended in.
- Continue to boil, stirring very gently, until the mixture reaches 236°F (113°C).
- Pour onto a marble slab. Let cool, undisturbed, until the temperature reaches 110°F (43°C).
- When the fudge has reached the proper temperature, mix it with a bench scraper or metal spatula until it thickens and becomes less shiny. If using nuts, add them at this time
- Quickly, while the mixture is still quite soft, transfer the fudge to the prepared sheet pan to cool completely.

- When cool, cover tightly and let stand at room temperature overnight. This maturing or ripening period improves the texture.
- Cut into squares of desired size.

Croissant

- ingredients and measurements

ingredients	Metric measures
Milk	900 g
Sugar	60 g
Salt	30 g
Butter, softened	160 g
Bread flour	1600 g
Yeast, instant	22 g
Butter for laying	900 g



- Preparation techniques for croissant
 - Prepare laminated dough or puff dough
 - Roll the dough into a rectangle 61 cm.
 - Cut 11 isosceles triangles, 23 cm high and 10 cm at the base, from the dough.
 - Make a 2-cm slit in the center of the base of each triangle. Working with one triangle at a time, gently stretch each of the 3 points of the triangle to elongate them.
 - Place the triangle on unfloured table with the narrow point directly away from you.
 - Roll the triangle up from the base, exerting gentle pressure with your fingertips.
 - Place seam side down on a parchment lined sheet pan, making 4 rows. Shape the croissants into crescents, so that the ends curve inward at the front.
 - Brush the croissants with egg wash. Proof at 85°F/29°C for 1 hour, or until doubled in size.
 - Brush the croissants with egg wash again. Bake at 375°F/191°C until well browned, about 15 minutes.



Activity 2: Guided Practice



Task 26:

Referring to the scenario in task 25, answer the following questions

- What are the ingredients peter and Paul should use in preparation of cheese cake?
- Elaborate the preparation techniques and process for cheese cake
- How do you incorporate air into the batter to achieve a light and fluffy texture?
- How do you cool the cheesecake to prevent condensation?
- How do you melt chocolate and combine it with other ingredients for fudge?
- What are the key indicators to know the sponge cake is perfectly baked?
- How do you slice and layer a sponge cake for professional presentation?



Activity 3: Application



Task 27:

Read the following scenario and perform the task that follow

You have received an order from a restaurant to prepare chocolate cake for 10 people to be served with African tea during supper. Your chef has tasked you to complete the order within two hours and ensure it is ready for service on time. Prepare a chocolate cake and ensure quality and timeliness, starting from selecting ingredients to the final presentation stage.

Topic 3.3 Layered cakes preparation



Activity 1: Problem Solving



Task 28:

Read the following scenario and answer the questions that follow

MURUNGI works at a hotel. Some of her daily tasks includes preparing layered cakes. While she was making cakes, she had doubts about how to make them, so she asks you to come and help her make the cakes because you know how to make them.

- Explain the ingredients and measurement of opera cake as one of layered cakes you can prepare.
- Describe the preparation techniques for Opera cake
- What are the ingredients of Dobos torte?

Key Facts 3.3 Layered cakes preparation

- **Introduction to Layered cakes**

Filled pastries are a delightful category of baked goods, with a variety of flavours and textures created by enclosing fillings inside dough. They can be sweet or savoury, flaky or soft, and are popular across cultures for their portability and rich taste.

- ✓ **Type of layered cakes**

✚ Opera cake

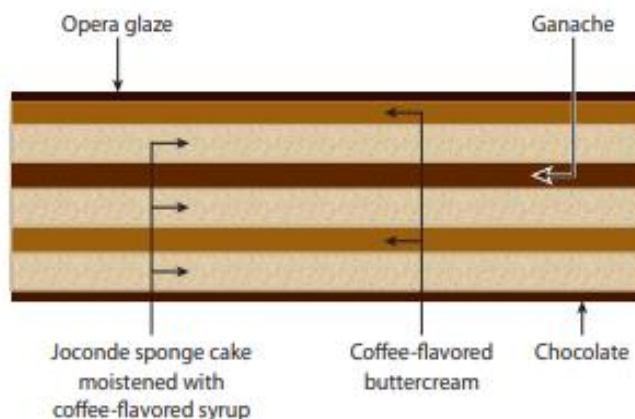


Figure 2: cakes preparation

○ Ingredients and measurements

Ingredients	Metric measures
Joconde sheet (by 62 cm	1 each
Dark chocolate, melted	113 g
Vegetable oil	14 g
Coffee simple syrup	240 ml
Medium ganache(lightly whipped)	170 g
Coffee buttercream	227 g
Hard ganache (warmed to glaze)	170 g



○ Preparation techniques for Opera cake

- Cut the sponge into 3 equal rectangles, about 6 × 12 in. (15 × 30 cm).
- Spread one sponge layer with a thin coat of melted chocolate. Refrigerate to set.
- Remove from the refrigerator, turn chocolate side down, and brush with the coffee syrup.
- Spread with a layer of buttercream, about 1/4 in. (5 mm) thick.
- Place a second sponge layer on top, brush with syrup, and spread with a thin layer of ganache.
- Top with the third layer of sponge and brush with syrup. Spread with a layer of the buttercream. Smooth the top carefully with a palette knife. Refrigerate or freeze until firm. The cake must be quite cold so the warm glaze does not melt the buttercream.
- Set the cake on a rack over a tray. Pour warm opera glaze over the cake. Pass a palette knife over the top of the cake and then tap the tray to smooth the glaze.
- Chill until set. Remove from the rack and trim the sides of the cake neatly and squarely with a hot knife.
- With additional ganache in a paper cone, pipe the word Opera on top of the cake.

Dobos torte

○ Ingredients and measurements

ingredients	Metric measures
Dobos sponge layers 20 cm	7 each
Brandy-flavored simple syrup	180 ml
Mocha buttercream	680 g
Sugar	170 g
Lemon juice	1.25 ml
Glucose syrup	35 g
Butter, soft	28 g
Chocolate, melted, tempered	227 g



○ Preparation techniques for Dobos torte

- Trim the edges of 6 of the Dobos layers to make them 20 cm in diameter. Place one layer on 20-cm cardboard cake round. Moisten with simple syrup and, reserving 227 g of the buttercream for décor, apply a thin, even layer of buttercream. Top with a second Dobos layer, moisten with syrup, and spread with buttercream. Repeat the process with the remaining trimmed layers. Finish the top and sides of the cake with buttercream.
- To prepare the caramel, combine the sugar, lemon juice, and glucose syrup in a heavy-bottomed saucepan set over medium heat and allow it to melt, stirring to dissolve. When all the sugar has dissolved, stop stirring and cook to the desired color. Remove from the heat and stir in the butter.
- Spread the caramel in an even layer over the reserved Dobos layer. Cut into 10 even wedges and allow to cool completely. Dip the rounded edge of each wedge in the tempered chocolate. Allow to set completely.
- Mark the torte into 10 portions. Using a pastry bag fitted with a #5 plain tip, pipe a small dome of buttercream on each portion. Fan the caramel-coated wedges around the torte, placing the pointed tip of each wedge at the center of the torte and fixing the opposite end in a buttercream dome to create a “pinwheel” effect.



Activity 2: Guided Practice



Task 29:

Read and answer the following questions

You are in a food and beverage workshop and you are preparing Dobos torte for the clients

- a. Which ingredients would you use for making good Dobos torte?.
- b. In detail, demonstrate the preparation techniques for Dobos torte.
- c. What is the importance of bringing butter and eggs to room temperature before use,
- d. How do you apply buttercream evenly between the sponge layers without overloading or leaving gaps?



Activity 3: Application



Task 30:

Read the following scenario and perform the task that follow

Ganza is a pastry chef at IMPANO hotel. Some of his tasks include preparing layered cake like Opera. While making the cake, he doubts about how to make it, so he asked you to come and help him to make Opera cake as an expert. Prepare the opera cake by respecting all the preparation process.

Topic 3.4 Filled pastries preparation



Activity 1: Problem Solving



Task 31:

Read carefully the scenario and answer the questions bellow

You work in the pastry section of LUXE Café, known for its freshly baked desserts. The café has received an order for a dessert platter featuring Tarte Tatin, Danish pastries, and Chocolate Rolls. The manager has emphasized the importance of maintaining the café's high-quality standards and meeting the customers' expectations for flavor, texture, and presentation.

- What ingredients would you use when making tarte tatin?
- Identify the ingredients you would use to prepare the Danish
- Explain the preparation techniques for Danish as Filled pastries
- Explain the baking and production techniques for Chocolate rolls

Key Facts 3.4 Filled pastries preparation

- **Introduction Filled pastries**

Filled pastries are a delightful category of baked goods, with a variety of flavours and textures created by enclosing fillings inside dough. They can be sweet or savoury, flaky or soft, and are popular across cultures for their portability and rich taste.

- ✓ **Type of filled pastries**



Danish

- Ingredients and measurements

Ingredients	Metric measures
DOUGH	
Bread flour	1.81 kg
Sugar	206 g
Instant dry yeast	28 g
Salt	28 g
Butter, soft	170 g
Eggs	369 g

Milk	840 mL
ROLL-IN	
Butter, cold	1.36 kg



Figure 3: Danish

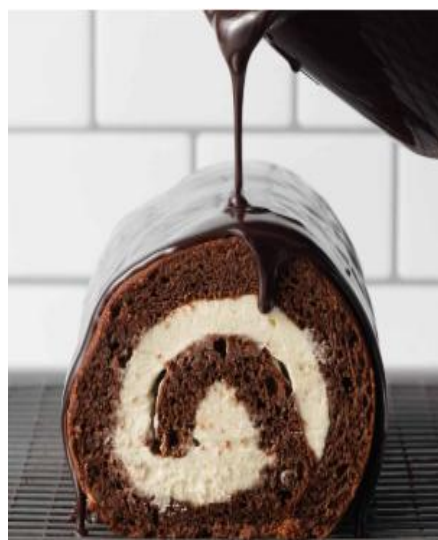
- Preparation techniques for Danish.
 - To prepare the dough, blend the flour, sugar, yeast, salt, butter, eggs, and milk on low speed with the dough hook attachment, about 2 minutes. Increase to medium speed and mix for an additional 4 minutes.
 - Turn out the dough onto a lightly floured surface. Cover the dough and ferment at 75°F/24° C until doubled in volume, about 2 hours.
 - Fold over the dough and spread it into a rectangle 12 by 16 in/30 by 41 cm on a parchment lined sheet pan. Wrap the dough tightly with plastic wrap and let it rest overnight or for 8 hours under refrigeration to completely relax the gluten.
 - Using a rolling pin, pound out the roll-in butter to make it pliable and lump-free. Shape it into a rectangle 8 by 24 by H in/20 by 61 by 1 cm. Chill the butter slightly.
 - To lock the roll-in into the dough, turn out the dough onto a lightly floured work surface and roll it into a rectangle 16 by 24 by H in/41 by 61 by 1 cm, keeping the edges straight and the corners squared. Place the roll-in on half of the dough rectangle. Fold the remaining half of the dough over the roll-in. Seal the edges, turn the dough 90 degrees, and roll into a rectangle 16 by 24 by H in/41 by 61 by 1 cm, making sure the edges are straight and the corners are squared.

- Cover the dough in plastic wrap and allow it to rest for 30 minutes under refrigeration.
- Turn the dough 90 degrees from its position before it was refrigerated and roll into a rectangle 16 by 24 by 1 cm thick, making sure the edges are straight and the corners are squared. Administer a three-fold (see page 220). Cover the dough in plastic wrap and let it to rest for 30 minutes under refrigeration. Repeat this process one more time for a total of two three-folds.
- After completing the final fold, wrap the dough in plastic wrap and allow it to rest under refrigeration for at least another 30 minutes before using. (The dough can be held under refrigeration or frozen.)

Chocolate rolls

- Ingredients and measurements

Ingredients	Metric measures
For the Roll Cake:	
all-purpose flour	500 g
granulated sugar	50 g
salt	1 tsp
instant yeast	7 g
whole milk	250 ml
unsalted butter (softened)	60 g
egg	1 large
For Filling	
unsalted butter (softened)	100 g
cocoa powder	50 g
brown sugar	120 g
For the Glaze (optional)	
whole milk	50 ml
dark chocolate (chopped)	100 g
powdered sugar	30 g



- Preparation techniques for chocolate rolls

Step 1: Prepare the Dough

- In a large mixing bowl, combine flour, sugar, salt, and yeast.

- Gradually add the warm milk, softened butter, and egg. Mix until a soft dough forms.
- Knead the dough on a floured surface for 8–10 minutes until smooth and elastic.
- Place the dough in a greased bowl, cover with a damp cloth, and let it rise for 1–1.5 hours or until doubled in size.

Step 2: Make the Filling

- In a bowl, mix the softened butter, cocoa powder, and brown sugar until a spreadable paste forms.

Step 3: Assemble the Rolls and bake

- Roll out the risen dough into a rectangle about 30x40 cm.
- Spread the chocolate filling evenly over the surface.
- Roll the dough tightly from one long edge to the other to form a log.
- Slice the log into 12 equal pieces (about 3–4 cm thick each).
- Place the rolls cut-side up in a greased baking dish or lined tray, leaving space between them.
- Cover the rolls with a cloth and let them rise again for 30–40 minutes, until puffed up.
- Preheat your oven to 180°C (fan-assisted) or 200°C (conventional).
- Bake the rolls for 20–25 minutes, until golden brown and cooked through.

Step 4: make the Glaze (Optional)

- Heat the milk in a saucepan over low heat. Add the chopped chocolate and powdered sugar, stirring until smooth.
- Drizzle the glaze over the warm rolls before serving.

Tarte tatin

○ Ingredients and measurements

Ingredients	Metric measures
caster sugar	100 g
glucose	10 g
water	200 ml
unsalted butter, diced	100 g
apples, peeled and cored	7
lemon, juice	½
puff pastry	175 g



○ Preparation techniques for Tarte tatin

- Cook the sugar, glucose and water in a thickbottomed copper (bear in mind that the tatin will be cooked in this so it will need to be ovenproof) until it reaches a pale, amber colour, which is pre-caramel.
- Remove from the heat and add the diced butter.
- While the butter is melting, cut the apples into eighths, lightly sprinkle with lemon juice and place on top of the caramel/butter
- Place in the oven for 25 minutes until the apples are half-cooked and starting to caramelize.
- Meanwhile, roll out the puff pastry, 3–4 mm thick, and slightly larger than the diameter of the pan.
- Cover the apples with the pastry and bake for a further 15–20 minutes, until the pastry is golden.
- Remove from the oven and leave to cool slightly before turning out.
- Serve with vanilla ice cream, apple sorbet or crème fraiche



Activity 2: Guided Practice



Task 32:

Read the following scenario and answer the questions that follow

You and two of your classmates have got a job to work in kitchen specifically in the bakery and pastry section. The chef of the bakery and pastry section asks you to make different types of filled pastries including Danish, chocolate rolls and tarte tatin.

- Demonstrate the step by step process for making chocolate rolls
- Classify the following ingredients which are in brackets in table below according to use in preparation of Chocolate rolls (**all-purpose flour, granulated sugar, salt instant yeast, whole milk, unsalted butter (softened), egg , cocoa powder, brown sugar, whole milk, dark chocolate (chopped), powdered sugar**)

For the Roll Cake	For Filling	For the Glaze (optional
a.	a.	a.
b.	b.	b.
c.	c.	c.
d.	d.	d.
e.	e.	e.



Activity 3: Application



Task 33:

Read the following scenario and perform the task that follow

MANZI is a worker at AMANDA Resort Hotel. One of his tasks is preparing filled cakes, like Tarte tatin. While he was making the cake, he wasn't sure about the preparation steps. He has asked you as an expert to help him make the cake, prepare Tarte tatin ensuring that all preparation processes are followed correctly.



Formative Assessment

1. Which of the following filling ingredients is commonly used to fill Chocolate rolls?
Answer by circle.
 - a. unsalted butter (softened)
 - b. cocoa powder
 - c. granulated sugar
 - d. salt
 - e. instant yeast
 - f. whole milk
2. Which of the following procedures for making glazing chocolate rolls? Answer by circle.
 - a. Heat the milk in a saucepan over low heat. Add the chopped chocolate and powdered sugar, stirring until smooth.
 - b. Cover the rolls with a cloth and let them rise again for 30–40 minutes, until puffed up
 - c. Drizzle the glaze over the warm rolls before serving.
3. State the steps that include in preparation techniques for chocolate rolls
4. Enumerate the ingredients for prepare Danish pastry.
5. Interpret the preparation techniques of making dough for chocolate rolls.
6. Write down the Tarte tatin ingredients and measurements for 2 portions
7. Enumerate two (2) types of Layered cakes
8. Write down preparation techniques for croissant bread
9. Specialty pastries are unique, high-quality baked goods often crafted with a focus on innovative flavors, presentation, or cultural traditions. State four (4) types of Specialty pastries
10. What are the preparation techniques for pumpkin cake?



Points to Remember

- **Selection of tools and equipment:**
 - ✓ Choose appropriate tools and equipment based on type of advanced pastry and techniques required to prepare for.
 - ✓ Consider factors such as size, material, and functionality when selecting tools and equipment to ensure efficiency and effectiveness in the kitchen.
- **Selection of ingredients**
 - ✓ Choose fresh, high-quality ingredients for particular pastry to enhance flavour, texture, and overall culinary experience.
- **Measurements:** Accurate measuring is crucial in baking. Use measuring cups and spoons for dry ingredients and a liquid measuring cup for liquids. Follow the recipe closely to maintain proper ratios.
- **Mixing technique:** Depending on the type of pastry the mixing technique varies. For example, puff pastry requires layering fat and dough, while shortcrust pastry benefits from minimal mixing to prevent gluten development.
- **Portion size:** Ensure portion sizes are consistent and appropriate for the pastry product type.
- **Preparation techniques:** respect all needed stages or steps for preparing particular advanced pastries.
- **Proving and baking:** respect required temperature and time for proving and baking advanced pastry basing on given recipe.
- **Practice and patience:** Pastry-making can be a skill that improves with practice. Don't be discouraged by initial failures; learn from them and adjust techniques as needed.



1. Fill in the self-assessment table below to evaluate your knowledge, skills, and attitudes following completion of this unit.
 - a. There are no correct or incorrect responses in this assessment. It serves as a tool for your personal reflection on the acquisition of knowledge, skills, and attitudes during the learning process.
 - b. Consider the following: Do you believe you possess the necessary knowledge, skills, or attitudes to perform the task? To what extent?
 - c. Review the statements provided and indicate your level of knowledge, skills, and attitudes by placing a checkmark in the appropriate column.
 - d. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Describe baking techniques / methods for some advanced pastry products					
Identify types of advanced pastry products					
Identify baking time and temperature control for					

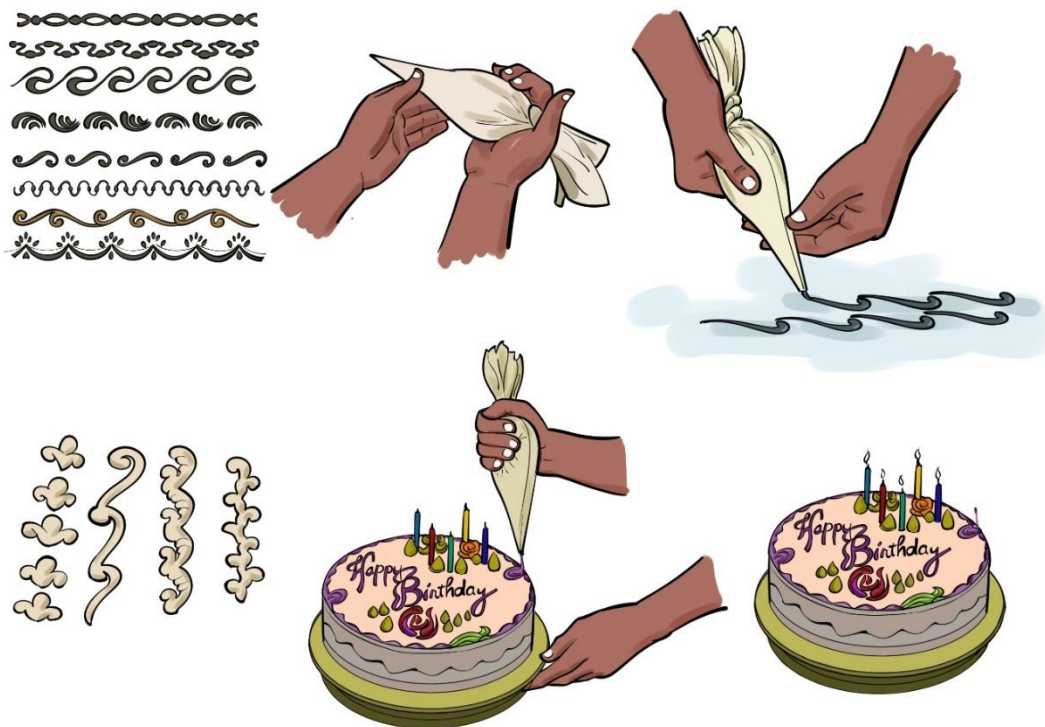
My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
advanced pastry products					
Perform pastry arts for advanced products.					
Perform Mise en place of ingredients tools and equipment for advanced pastry products.					
Apply baking skills for advanced pastry					
Show teamwork and collaboration spirits.					
Be Innovative and Creative in presentations of pastry products					
Be tidy and organized throughout tasks					

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Show positive work ethics					
Be honest in measuring, portioning and mixing ingredients.					

2. Fill in the table above and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.
3.	3.	3.

UNIT 4: PERFORM POST-BAKING ACTIVITIES



Unit summary

This unit provides you with the knowledge, skills and attitudes required to Perform post-baking activities. At the end of this unit, the learner will be able to decorate advanced breads and pastries, apply wrapping and labeling techniques for advanced breads and pastries, apply storage techniques for advanced breads and pastry products.

Self-Assessment: Unit 1

1. Referring to the learning unit illustrations above discuss the following:
 - a. What does the illustration show?
 - b. What do you think this learning unit is about based on the illustration?
2. Fill in and complete the self-assessment table below to assess your level of knowledge, skills and attitudes under this unit.
 - a. There is no right or wrong way to answer this assessment. It is for your own reference and self-reflection on the knowledge, skills and attitudes acquisition during the learning process.
 - b. Think about yourself: do you think you have the knowledge, skills or attitudes to do the task? How well?
 - c. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.
 - d. At the end of this learning unit, you will assess yourself again.

My experience	I do not	I know	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	a little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Identify ingredients for decorating advanced breads and pastry products					
Describe types of pastry decorating tools.					
Describe techniques for storing advanced bread and pastry					

My experience	I do not	I know	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	a little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Apply pastry arts					
Apply wrapping and labeling techniques for advanced breads and pastry products					
Apply storing techniques for advanced breads and pastry products					
Perform Mise en place of ingredients tools and equipment needed to decorate advanced pastry products.					
Show Teamwork and Collaboration spirits.					
Be Innovative and Creative in presentations of pastry products					

My experience	I do not	I know	I have	I have a lot	I am
Knowledge, skills and attitudes	have any experience doing this.	a little about this.	some experience doing this.	of experience with this.	confident in my ability to do this.
Be tidy and organized throughout tasks					
Be Honest in measuring, portioning and mixing ingredients.					



Key Competencies:

Knowledge	Skills	Attitudes
1. Identify ingredients for decorating advanced breads and pastry products	1. Apply pastry arts	1. Show teamwork and collaboration spirits.
2. Describe types of pastry decorating tools.	2. Apply wrapping and labeling techniques for advanced breads and pastry products	2. Be innovative and creative in presentations of pastry products
3. Describe techniques for storing advanced bread and pastry	3. Apply storing techniques for advanced breads and pastry products	3. Be tidy and organized throughout tasks

Knowledge	Skills	Attitudes
	4. Perform Mise en place of ingredients tools and equipment needed to decorate advanced pastry products.	4. Be honest in measuring, portioning and mixing ingredients.



Discovery activity:



Task 34:

1. From your experience in breads and pastry products decoration, read and answer the following questions:
 - a. What are ingredients or products needed for decorate pastry products?
 - b. Identify the most appropriate tools needed for decorate advanced breads and pastry products.
 - c. Identify the metric measurement for preparing advanced breads and pastry products.
 - d. Describe wrapping and labelling techniques applied on advanced breads and pastry products before storing process.
 - e. What are storing techniques and conditions for advanced breads and pastry products?

Topic 4.1: Decorating advanced bread and pastry products



Activity 1: Problem Solving



Task 35:

Read the following scenario and answer the questions that follow

X-Lay Hotel soon will open in Mutara location, the hotel need someone who can train their staff about breads and pastry products decoration, breads and pastry products wrapping and storing. You are the one who has been appointed to offer these training.

- What are the products used in decorating advanced breads and pastry products
- Identify tools needed for decorating advanced breads and pastry products.
- State wrapping techniques for advanced breads and pastry products.

Key Facts 4.1: Decorating advanced bread and pastry products

- Introduction to advanced bread and pastry products decoration**

Decorating bread and pastry products is an art that elevates baked goods from simple treats to exquisite masterpieces. Advanced decoration techniques focus on combining aesthetics with taste, enhancing both the visual appeal and the culinary experience.

There are, of course, many styles of cakes and advanced pastry decorating, and within each style hundreds or thousands of designs are possible.

✓ Advanced breads and Pastry product decoration tools		
Name	Image	Use of the tools and equipment
 Palette knife or steel spatula.		A spatula with a long, flexible blade for spreading and smoothing icings and fillings.

 Pastry Brush		Used for applying egg washes, glazes, and butter to pastries and bread.
 Piping Bags and Nozzles		Used for decorating cakes and pastries or filling them with cream or custard.
 Whisk		Used for mixing dry ingredients or whisking eggs and creams.
 Dough scraper		Used to handle cream and keep work surfaces clean.
 Decorating Brushes		Small brushes used for applying glazes and edible decorations.
 Cake Turntable		is a rotating platform designed to make cake decoration easier and more precise

 Stencils		Stencils are an essential tool for adding precise and intricate designs to baked goods such as cakes, cookies, breads, and pastries. They are reusable templates made from plastic, silicone, or metal, used to create patterns by applying powdered sugar, cocoa powder, icing, or airbrushed colors.
 Decorating Combs		These are versatile tools used in cake and pastry decoration to create textured patterns on surfaces such as buttercream, ganache, or fondant.
 Edible Image Printer		is a specialized printer designed to print images, designs, or texts on edible paper using food-safe ink. These printers allow bakers to customize cakes, cookies, and

		other desserts with precise,
 Stainless steel Mixing bowls		Are used for serving as versatile containers for combining, mixing, and preparing ingredients.

- **Ingredients or products for decorating pastries**

- ✓ **Frosting and Icing**

- Simple buttercream

- Ingredients and metric measures

Ingredients	Metric measures
Butter	1000
Shortening	500 g
Confectioners' sugar	2500 g
Egg whites, pasteurized	160 g
Lemon juice	10 g
Vanilla extract	15 g
Water (optional)	125 g



- Instructions for making simple buttercream
 - Using the paddle attachment, cream together the butter, shortening, and sugar until well blended.
 - Add the egg whites, lemon juice, and vanilla. Blend in at medium speed. Then mix at high speed until light and fluffy.
 - For a softer buttercream, blend in the water.

Royal Icing

Ingredients and metric measures

Ingredients	Metric measures
Confectioners' sugar	500 g
Cream of tartar	0.5 ml
Egg whites, pasteurized	95 g



Instructions for making Royal icing

- Sift the sugar and cream of tartar into the bowl of a mixer fitted with the paddle attachment.
- In a small bowl, beat the egg whites briefly, to break them up.
- With the mixer running on low speed, gradually add the egg whites.
- Continue to mix until the ingredients are well blended and the icing stands in soft peaks.

Ganache

Ingredients and metric measures

Ingredients	Metric measures
Version 1	
double cream	300 ml
couverture, cut into small pieces	350 g
unsalted butter	85 g
spirit or liqueur	20 ml
Version 2	
double cream	300 ml
vanilla pod	½
couverture, cut into small pieces	600 g
unsalted butter	120 g



- Instructions for making Ganache

- Boil the cream (and the vanilla for version 2) in a heavy saucepan.
- Pour the cream over the couverture. Whisk with a fine whisk until the chocolate has melted.
- Whisk in the butter (and the liqueur for version
- Stir over ice until the mixture has the required consistency.



Coffee marble Glaze

- Ingredients and metric measures

Ingredients	Metric measures
Gelatin	8 g
Water	250 g
Sugar	40 g
Glucose	40 g
Vanilla bean, split	1
Coffee liqueur	20 g
Coffee extract	10 g



- Instructions for making Coffee marble Glaze

- Soften the gelatin in cold water
- Simmer the water, sugar, glucose, and vanilla bean until the sugar and glucose are completely dissolved.
- Remove from the heat, cool slightly, and add the gelatin. Stir until dissolved. Scrape the seeds from the vanilla bean and add to the syrup.
- When ready to use, rewarm the glaze if necessary. Add the coffee liqueur and extract and swirl them in slightly; do not mix them in.
- Swirl the glaze over the surface of the cake so the coffee extract gives a marbled effect

✓ Fondant

Rolled fondant

Rolled fondant is a pliable sugar-based dough commonly used to cover cakes, pastries, and cupcakes. It provides a smooth, elegant finish and serves as a canvas for intricate decorations.

○ Ingredients and metric measures

Ingredients	Metric measures
Powdered Sugar (Icing Sugar)	900 g
Gelatin (Unflavored)	10g
Cold Water	60 ml
Glucose Syrup	125 ml
Glycerin (Food-Grade)	15 ml
Vanilla Extract (Optional)	1 tsp
Shortening or Butter	10 g



○ Instructions for making rolled fondant

- Sprinkle the gelatin over the cold water in a heatproof bowl. Let it bloom for 5 minutes.
- Heat the mixture over a double boiler or microwave in short bursts until the gelatin is fully dissolved (do not boil).
- Stir the glucose syrup and glycerin into the warm gelatin mixture. Mix until smooth.
- Add vanilla extract or other flavoring, if desired.
- Place the sifted powdered sugar in a large mixing bowl. Make a well in the center.
- Pour the warm gelatin mixture into the sugar well.
- Stir with a wooden spoon or silicone spatula until the mixture becomes too stiff to mix.

- Transfer the mixture to a clean, lightly greased surface. Knead the fondant with greased hands until smooth and pliable.
- If the fondant is too sticky, add a small amount of powdered sugar. If it's too dry, knead in a few drops of water or glycerin.
- Wrap the fondant tightly in plastic wrap and place it in an airtight container. Allow it to rest for at least 1 hour at room temperature before use.

- **Tips for Success**

- ✓ **Sifting Sugar:** Ensure powdered sugar is sifted to prevent lumps.
- ✓ **Temperature Control:** Work with warm fondant to prevent cracking; reheat slightly if it becomes stiff.
- ✓ **Coloring:** Add food coloring during the kneading process for even distribution.
- ✓ **Meringue**

Meringue is a versatile, light, and airy mixture of whipped egg whites and sugar. It serves as both an ingredient and a decoration in cake making. Its adaptability allows bakers to create elegant designs, add texture, and enhance the overall flavor and visual appeal of cakes.

 French Meringue

Ingredients	Metric measures
Pasteurized egg whites	250 g
Fine granulated sugar	250 g
Fine granulated sugar or sifted confectioners' sugar	250 g



- Ingredients and metric measurements
- Instructions for making French meringue

- With the whip attachment, beat the egg whites first at medium speed, then at high speed, until they form soft peaks.
- Add the first quantity of sugar, a little at a time, with the machine running. Whip until stiff.
- Stop the machine. Fold in the remaining sugar with a spatula.

Swiss Meringue

- Ingredients and metric measurements

Ingredients	Metric measures
Pasteurized egg whites	250 g
Fine granulated sugar or half granulated and half confectioners' sugar	500 g



- Instructions for making Swiss meringue
 - Place the egg whites and sugar in a stainless steel bowl or in the top of a double boiler. Beat with a wire whip over hot water until the mixture is warm (about 120°F/50°C).
 - Transfer the mixture to the bowl of a mixing machine. Whip it at high speed until stiff peaks form and the meringue is completely cool.

Italian Meringue

- Ingredients and metric measurements

Ingredients	Metric measures
Sugar	500 g
Water	125 ml
Egg whites	250 g



- Instructions for making Italian meringue
 - Heat the sugar and water in a saucepan until the sugar dissolves and the mixture boils. Boil until a candy thermometer placed in the syrup registers 243°F (117°C).
 - While the syrup is cooking, beat the egg whites in a mixing machine until they form soft peaks.
 - With the machine running, very slowly beat in the hot syrup (a).
 - Continue beating until the meringue is cool and forms firm peaks (b).

✓ **Pastry Cream and Custards**

✚ **Pastry Cream**

- Ingredients and metric measurements

Ingredients	Metric measures
Milk	1 l
Sugar	125 g
Egg yolks	90 g
Whole eggs	125 g
Cornstarch	75 g
Sugar	125 g
Butter	60 g
Vanilla extract	15 ml



- Instructions for making pastry cream
 - In a heavy saucepan or kettle, dissolve the sugar in the milk and bring just to a boil.
 - With a whip, beat the egg yolks and whole eggs in a stainless steel bowl.
 - Sift the cornstarch and sugar into the eggs. Beat with the whip until perfectly smooth (a).
 - Temper the egg mixture by slowly beating in the hot milk in a thin stream (b).

- Return the mixture to the heat and bring to a boil, stirring constantly.
- When the mixture comes to a boil, continue to stir constantly and boil for up to 2 minutes, until the cream has no raw, starchy taste (c). (As always when tasting, use a clean tasting spoon, and do not reuse the spoon.)
- Remove from the heat. Stir in the butter and vanilla. Mix until the butter is melted and completely blended in (d).
- Pour out into a clean, sanitized hotel pan or other shallow pan. Cover with plastic film placed directly in contact with the surface of the cream to prevent a crust from forming (e). Cool and chill as quickly as possible.
- For filling pastries such as éclairs and napoleons, whip the chilled pastry cream until smooth before using.

Chantilly Cream

- Ingredients and metric measurements

Ingredients	Metric measures
whipping cream	500 ml
caster sugar	100 g
vanilla arôme	a few drops



- Instructions for making Chantilly Cream.
 - Place all ingredients in a bowl. Whisk over ice until the mixture will form soft peaks.
 - If using a mechanical mixer, stand and watch until the mixture is ready – do not leave it unattended.
 - Cover and place in the fridge immediately.

- **Pastry product decoration techniques.**

Pastry decoration is an essential aspect of baking that elevates a simple dessert into a visual masterpiece. It combines artistry and craftsmanship to enhance the aesthetic appeal of cakes, tarts, pies, and other baked goods.

Beyond just appearance, well-executed decorations can also improve the flavour, texture, and overall sensory experience of a pastry.

✓ **Glazing and Icing**

 Glazes

- Apply fruit glazes or chocolate ganache to create a shiny, smooth surface.
- Use mirror glaze for an elegant, reflective finish on cakes and tarts.

 Icing

- Spread royal icing for a smooth, hard finish or pipe it for intricate designs.
- Use a powdered sugar glaze for a delicate, semi-transparent look.

✓ **Piping Work**

 Buttercream designs

- Use piping bags and tips to create rosettes, stars, or intricate patterns.
- Experiment with different nozzles for varied textures and effects.

 Whipped cream: Add light, fluffy decorations like peaks and swirls.

 Ganache drip effect: Drip chocolate ganache along the edges for a modern look.

✓ **Chocolate techniques**

 Add elegance with chocolate curls or grated chocolate.

 Create decorative shapes using tempered chocolate molds.

 Add abstract patterns by drizzling melted chocolate over pastries.

✓ **Fruit decorations**

 Arrange berries, kiwi slices, or citrus segments for vibrant color.

 Use candied orange peel or cherries for a sweet, decorative touch.

 Drizzle or spread purees to add flavor and a modern aesthetic

✓ **Dusting and stenciling**

- ✚ Lightly dust to add contrast or use stencils for consistent designs.
- ✚ Sprinkle for a glamorous, festive touch.

✓ **Fondant and marzipan**

- ✚ Cover pastries with smooth fondant for a polished look.
- ✚ Sculpt shapes, ribbons, or flowers to customize designs.
- ✚ Shape into edible figures or fruits for a playful presentation.

✓ **Edible flowers and greens**

- ✚ Decorate with pansies, violets, or nasturtiums for a natural, elegant flair.
- ✚ Coat in sugar for a crystallized, sparkling effect.



Activity 2: Guided Practice



Task 36:

Read the and answer the following questions

As a chef at Best friend restaurant you are tasked by the sous chef to prepare pastry cream and Chantilly cream

- a. Among of the following ingredient, which ingredients are not included to the ingredients used in preparation of pastry cream and Chantilly cream?
- Milk
 - Sugar
 - Egg yolks
 - Cornstarch
 - Fresh cream
 - Sugar
 - Butter

- b. How do you scald the milk to prevent it from burning?
- c. What is the importance of tempering egg yolks, and how do you perform this step without curdling the eggs?
- d. What techniques do you use to prevent a skin from forming on the pastry cream as it cools
- e. What type of cream is best suited for making Chantilly cream, and why?
- f. What methods can you use to add intricate details to your decoration for an appealing finish?



Activity 3: Application



Task 37:

Read the following scenario and perform the task given

BASABOSE and GATERA planned a wedding, and now decided that BWIZA hotel will prepare cake for their ceremony because they believe that BWIZA hotel has Professional cake decorators. You have been selected by pastry chef to decorate that cake and you are requested to prepare simple butter cream because cake is already prepared one day before decoration process. Prepare the simple butter cream respect all preparation process.

Topic 4.2: Wrapping and labelling techniques of advanced bread and pastry products



Activity 1: Problem Solving



Task 38:

Read the scenario below and answer the questions that follow

Berwa is a chef at BUX hotel, she is always ready to make bakery and pastry products. But she is always forgetting about wrapping and labeling those baked products. Guide Berwa by explaining to her about wrapping and labelling through answering the following questions:

- Explain clearly the importance of wrapping advanced breads and pastry products before storing process.
- Describe the techniques of wrapping of advanced breads and pastry products
- Discuss why is important to label pastry and bakery product before storing

Key Facts 4.2: Wrapping and labelling techniques of advanced bread and pastry products.

- **Introduction to the advanced breads and pastry products wrapping and labelling**
 - ✓ Wrapping is a crucial technique in the preparation, storage, and presentation of pastry products. Proper wrapping ensures that pastries maintain their freshness, flavor, and texture while also providing protection during transportation and storage. Whether you're working with raw dough, partially prepared pastries, or fully baked goods, the choice of wrapping material and technique plays a significant role in preserving the quality of the product.
 - ✓ Labeling is a vital aspect of the production, storage, and distribution of advanced breads and pastry products. Beyond simple identification, labels serve as a means of communication between bakers, retailers, and consumers, providing essential information about the product's ingredients, storage requirements, preparation instructions, and expiration dates.

- **Importance of wrapping advanced breads and pastry products before storing process.**
 - ✓ Wrapping prevents exposure to air, which can cause baked goods to dry out or stale quickly.
 - ✓ It locks in the natural moisture of the product, ensuring a soft and flavourful texture, especially for delicate items like croissants and brioche.
 - ✓ Wrapping creates a barrier against dust, bacteria, and other contaminants, ensuring the pastries remain hygienic.
 - ✓ It also prevents cross-contamination of flavors from other stored foods, particularly in refrigerators or freezers.
 - ✓ Delicate pastries, such as mille-feuille, éclairs, or laminated dough products, are vulnerable to damage. Wrapping protects them from being crushed or deformed during handling or stacking.
 - ✓ For crusty breads or puff pastries, proper wrapping helps maintain their crisp texture while shielding them from external moisture.
 - ✓ Airtight wrapping slows down the staling process for baked goods.
 - ✓ For unbaked or partially baked products, it preserves their usability for longer periods, especially when frozen, reducing waste.
 - ✓ When storing pastries in the freezer, wrapping prevents ice crystals from forming on the surface, which can alter the texture and flavor of the product.
 - ✓ Double-wrapping, often with plastic wrap followed by aluminum foil or freezer bags, offers additional protection against freezer burn.
 - ✓ When storing pastries in the freezer, wrapping prevents ice crystals from forming on the surface, which can alter the texture and flavor of the product.
 - ✓ Double-wrapping, often with plastic wrap followed by aluminum foil or freezer bags, offers additional protection against freezer burn.
- **Wrapping techniques for advanced breads and pastry products.**
 - ✓ **Wrapping Crusty Breads (e.g., Baguettes, Artisan Loaves)**
 -  Allow the bread to cool completely to room temperature.
 -  Wrap the loaf loosely in plastic wrap or a paper bag to allow some airflow, which helps preserve the crust's texture.

-  For freezing, wrap tightly in plastic wrap to prevent freezer burn, then place in a resealable freezer bag for additional protection.
- ✓ **Wrapping Soft Breads (e.g., Brioche, Sandwich Loaves)**
 -  Cool the bread completely before wrapping.
 -  Wrap tightly with plastic wrap, ensuring all surfaces are sealed to prevent air exposure.
 -  For freezing, use a double layer of plastic wrap followed by aluminum foil for added protection
- ✓ **Wrapping Laminated Pastries (e.g., Croissants, Puff Pastries)**
 -  For unbaked laminated dough, chill slightly to firm up the layers before wrapping.
 -  Wrap tightly in plastic wrap, ensuring the edges are well-sealed.
 -  For baked pastries, wrap individually in plastic wrap and store in a resealable bag or airtight container.
- ✓ **Wrapping Filled Pastries (e.g., Danish, Strudel)**
 -  Allow the filling to cool completely and set before wrapping.
 -  Use a layer of parchment or wax paper to separate sticky fillings from the wrap.
 -  Wrap tightly in plastic wrap, ensuring the filling and edges are secure.
- ✓ **Wrapping Decorative Pastries and Shaped Dough**
 -  Freeze shaped dough slightly to firm it up and stabilize delicate features.
 -  Wrap loosely but securely with plastic wrap to avoid deformation.
 -  If freezing for long-term storage, add a second layer of aluminum foil or place in a rigid container for extra protection.
- ✓ **Wrapping for Glazed and Iced Pastries**
 -  Allow the glaze or icing to set fully before wrapping.
 -  Use parchment or wax paper as a barrier between the pastry and the plastic wrap.
 -  Wrap gently but snugly to avoid disturbing the decorative elements.
- ✓ **Double Wrapping for Freezing**
 -  Wrap the bread or pastry in plastic wrap first to create an airtight seal.

-  Add a layer of aluminum foil or place the wrapped item in a freezer-safe resealable bag.
-  Label and date the package for tracking freshness.
-  Wrapping for Bulk Storage
-  Place a layer of parchment or wax paper between individual pastries or bread slices.
-  Wrap the entire stack or group tightly with plastic wrap.
-  Use an airtight container or freezer bag for additional protection if needed.
- **Importance of labelling advanced breads and pastry products before storing process.**
 - ✓ **Ensures product identification:** Avoid confusion between similar products, especially in a bakery with a wide variety of offerings.
 - ✓ **Facilitates inventory management:** Simplifies the tracking of products, especially when managing large batches or multiple types of breads and pastries.
 - ✓ **Tracks freshness and shelf life:** Provides critical details like production date, packaging date, and expiration or best-before date.
 - ✓ **Enhances food safety and compliance:** Displays allergens, ingredients, and storage instructions to comply with food safety regulations.
 - ✓ **Guides storage requirements:** Communicates specific storage instructions such as refrigeration, freezing, or room temperature conditions.
 - ✓ **Prevents cross-contamination:** Labels can indicate allergen-containing products or items processed in shared environments.
 - ✓ **Assists in quality control:** Batch numbers or production codes on labels allow for traceability and quality audits.
- **Labelling for advanced breads and pastry products.**
 - ✓ Clearly state the product name (e.g., "Artisan Sourdough," "Hazelnut Praline Danish").
 - ✓ Use descriptive terms that reflect the product's unique qualities or features.
 - ✓ List all ingredients in descending order of their weight during preparation.
 - ✓ Highlight allergens like nuts, dairy, eggs, or gluten using bold text or separate allergen warnings.

- ✓ Display Expiry and Production Dates Include "Best Before" or "Use By" dates to indicate freshness.
- ✓ Add a production or packaging date for traceability, especially for bulk or wholesale products.
- ✓ Specify storage conditions, such as:
 - 📌 "Keep Refrigerated at 4°C or Below."
 - 📌 "Store in a Cool, Dry Place."
 - 📌 "Freeze if Not Consumed Within 3 Days."
- ✓ Use batch codes for traceability in case of recalls or quality checks.
- ✓ These codes help identify production details and ensure accountability.
- ✓ Provide a nutrition facts panel, including serving size, calories, fats, carbohydrates, proteins, and sodium.
- ✓ Add the bakery's name, logo, and contact details.
- ✓ Highlight certifications (e.g., "Organic," "Fair Trade") or claims (e.g., "No Artificial Preservatives," "Gluten-Free").



Activity 2: Guided Practice



Task 39:

Read the scenario below and answer the questions that follow

As a pastry and bakery chef, you have prepared different bakery and pastry products which will be consumed one day after preparation, to ensure safety of your products:

- a. Among listed items choose at least two (2) which are suitable for wrapping advanced breads and pastry products before storing
 - i. Stainless container
 - ii. plastic wrap
 - iii. Uncovered plastic box
 - iv. Clirring film
 - v. Cool rack

- b. The information below is recommended for labelling stored breads and pastry products except.
- i. Name of product
 - ii. Production and expiring date
 - iii. Cooking tools and equipment
 - iv. Allergy information
 - v. Composition ingredients
 - vi. Storage conditions.
- c. Why is it essential to wrap bakery products properly before storage or delivery?
- d. What steps do you take to prevent contamination during the wrapping process?
- e. What wrapping technique are most effective for maintaining the freshness of bread, cakes and pastries?
- f. How do you ensure that your labelling complies with legal requirements and food safety standards?



Activity 3: Application



Task 40:

Read the scenario below and perform the task given

As a pastry chef in one of Five (5) star hotel in Rwanda, you have to make sure that produced pastry products are safe to the consumers. In order to achieve that, you have to monitor and check about pastry products storage and take some measures to prevent cross-contamination. One among these measures is to inspect and monitor the wrapping of prepared products. Show how you can conduct the inspection and fill the required monitoring checklist below.

Activity	Comments
Gather necessary tools (thermometer, labels, wrapping materials, gloves).	
Ensure personal hygiene (clean hands, use of gloves, hair net).	
Check storage temperature (refrigerator/freezer).	
Verify that storage areas are clean and sanitized.	
Ensure products are stored in labeled containers with expiry dates.	
Inspect wrapping materials for cleanliness and quality (no tears or holes).	
Ensure all products are fully wrapped to prevent air exposure.	
Verify that wrapping materials are food-grade and suitable for the product.	
Check that raw and ready-to-eat products are stored separately.	
Ensure products are placed on proper shelving (e.g., raw products below cooked).	
Verify use of separate tools for handling different products (e.g., knives, trays).	
Record inspection results (temperature logs, wrapping checks, issues identified).	
Take corrective measures for any non-compliance (e.g., re-wrap, discard contaminated products).	

Topic 4.3: Storage techniques and conditions for advanced breads and pastry products.



Activity 1: Problem Solving



Task 41:

Read the scenario below and answer the questions that follow

Delicy22B hotel is hiring someone who can train their staff about food safety and cross-contamination prevention, the appointed to offer this training have to emphasize on bakery and pastry products. Basing on this scenario,

- Identify storage conditions are meant for refrigerating bakery and pastry products?
- Describe storing techniques and conditions needed for storing pastry and bakery products at room temperature?

Key Facts 4.3: Storage techniques and conditions for advanced breads and pastry products.

- **Introduction to the storage of advanced breads and pastry products**

- ✓ The storage of advanced breads and pastry products is a critical aspect of maintaining their quality, texture, flavor, and overall appeal. Since these items are often delicate and perishable, proper storage techniques are necessary to ensure they remain fresh and safe for consumption. Whether you are a professional baker or a home enthusiast, understanding the best practices for storing advanced breads and pastries can help prolong their shelf life and reduce waste.
- ✓ Advanced breads and pastries, which can include artisan loaves, laminated doughs (like croissants and puff pastries), filled pastries (such as Danish), and other intricate creations, require careful handling and storage. These products often involve complex processes, delicate ingredients, and specific environmental conditions, making proper storage essential.

- **Storage techniques and conditions for advanced breads and pastry products.**

- ✓ **At room temperature storage conditions**

- ✚ The optimal room temperature for storing most breads and pastries is between 18°C and 22°C (65°F to 72°F).
- ✚ Avoid placing baked goods in damp or humid areas.
- ✚ Pastries like croissants, Danishes, and other laminated dough should be stored in moderate humidity, which helps keep them from drying out while preserving their flakiness.
- ✚ Wrap bread in paper bags for optimal freshness, as paper allows the bread to breathe while still preventing it from becoming too dry.
- ✚ For pastries such as croissants, danishes, and puff pastry items, **plastic wrap** or airtight containers are best to preserve freshness and prevent them from drying out.
- ✚ If you plan to store pastries for a longer period at room temperature (over 2-3 days), using an airtight container can help maintain freshness without drying them out.
- ✚ Store baked goods away from direct sunlight or heat sources, which can accelerate staling and cause products to become too warm, leading to condensation and potential spoilage.
- ✚ Choose a cool, dry location such as a pantry, countertop, or shelf for storing baked goods. Avoid places like near ovens, radiators, or windows where temperatures can fluctuate.
- ✚ Artisan or Sourdough Breads should be stored at room temperature for up to 2-3 days if wrapped properly, as long as the humidity is not too high.
- ✚ Croissants, Danish Pastries, and Puff Pastries: should be consumed within 1-2 days at room temperature to maintain their crispness. After this, they may begin to lose their freshness and texture.
- ✚ **Filled Pastries** (e.g., with custards or cream): If not eaten within a day, they should be refrigerated due to the perishable nature of the fillings.

✓ **Refrigeration storage conditions for advanced breads and pastry products**

- ✚ The optimal temperature for refrigeration of advanced breads and pastry products is between 1°C and 4°C (34°F to 40°F).
- ✚ Cream-filled pastries (such as éclairs, cream puffs, or custard-filled pastries) should be refrigerated because the filling can spoil at room temperature.
- ✚ Fruit-filled pastries or pies containing dairy products or custard should also be refrigerated to prevent the growth of harmful bacteria.
- ✚ For loaves of bread, wrap the loaf tightly in plastic wrap, foil, or place it in a resealable plastic bag. This helps to prevent the bread from drying out and absorbing other odors in the refrigerator.
- ✚ For pastries, wrap them individually in plastic wrap or store them in airtight containers to keep them fresh and prevent them from becoming soggy.
- ✚ For products like croissants and Danish pastries, be sure to wrap them tightly to avoid air exposure, which can lead to staleness.
- ✚ Bread stored in the refrigerator can last up to 5-7 days.
- ✚ Cream-filled or custard pastries should be consumed within 1-2 days when stored in the refrigerator to ensure the filling remains safe and fresh.
- ✚ Fruit-filled pastries: Refrigerated fruit pastries can last 2-3 days in the fridge.
- ✚ Only refrigerate products when necessary, especially if they contain fillings or perishable ingredients. For most plain breads and non-filled pastries, refrigeration is not needed unless you need to extend the shelf life for more than a couple of days.



Activity 2: Guided Practice



Task 42:

Read the scenario below and answer the questions that follow

As an employee at XV hotel where their store keeper has taken his day off, the supervisor of the hotel asks you to work on behalf of the store keeper and deals issues of storing the bakery products.

- a. What is the ideal temperature for storing advanced bread to prolong its shelf life?
- b. How do you separate pastries that require refrigeration from those that don't?
- c. What considerations should you make when storing large quantities of advanced bread and pastries?
- d. What techniques do you use to protect pastries with delicate decorations or fillings?



Activity 3: Application



Task 43:

Read the scenario below and perform the task given

You are a pastry chef at STAR hotel in Rwanda. At the end of your shift, you have a variety of bakery and pastry products that need to be stored properly to maintain their freshness, quality, and safety. Each product has specific storage requirements as follows:

- a. Freshly baked bread and croissants- at room temperature in a clean, dry environment.
- b. Cream-filled éclairs and cheesecakes - refrigeration at a temperature of 2-4°C to prevent spoilage.
- c. Unbaked pastry dough - frozen at -18°C to preserve its texture and quality for future use.
- d. Decorative sugar sculptures - in a cool, dry place away from humidity to prevent melting or deformation.

Required:

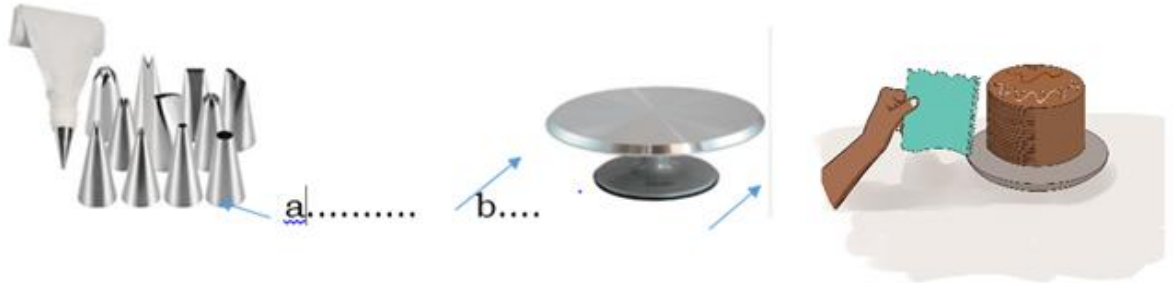
- i. Demonstrate proper storage practices for all products.
- ii. Record and report the storage conditions in a log sheet below.

Date	Product Name	Storage Method	Storage Area (Room/Fridge/Freezer)	Required Temperature	Actual Temperature	Condition of Wrapping (✓/✗)	Labeling (✓/✗)	Comments/Corrective Actions
YYYY-MM-DD	Freshly Baked Bread	Room Temperature Storage	Room Storage Area	18-22°C				
YYYY-MM-DD	Croissants	Room Temperature Storage	Room Storage Area	18-22°C				
YYYY-MM-DD	Cream-Filled Éclairs	Refrigerated Storage	Refrigerator	2-4°C				
YYYY-MM-DD	Cheesecakes	Refrigerated Storage	Refrigerator	2-4°C				
YYYY-MM-DD	Unbaked Pastry Dough	Frozen Storage	Freezer	-18°C				
YYYY-MM-DD	Decorative Sugar Art	Room Temperature Storage	Cool, Dry Place	18-22°C (Low Humidity)				



Formative Assessment

1. Name the following images of tools and equipment used in preparation for decoration Advanced breads and Pastry product.



2. True and False questions
 - a. Rolled fondant is a non-pliable sugar-based dough commonly used to cover cakes, pastries, and cupcakes
 - b. Meringue is a versatile, light, and airy mixture of whipped egg whites and sugar.
 - c. Pastry decoration is an essential aspect of baking that elevates a simple dessert into a visual masterpiece.
3. Differentiate wrapping from labeling as both are technical terms used while storing advanced bread and pastry products.
4. What are the importance of labeling advanced bread and pastry products?
5. Describe the importance of wrapping advanced bread and pastry products before storing
6. Develop refrigeration storage conditions for advanced breads and pastry products
7. What are the right temperature of refrigerator?
8. Explain clearly the process of wrapping decorative pastries and shaped dough
9. Identify five (5) Pastry product decoration techniques
10. Enumerate the main ingredients of pastry cream.
11. Summarize the instruction of making Chantilly cream
12. Which instruction that guide you to make French meringue
13. Describe the tips a Baker should follow while He or She is preparing rolled fondant.



Points to Remember

- **Plan the Design**
 - ✓ Before decorating, have a clear idea of the final look you want to achieve.
 - ✓ Match the decoration style to the occasion, whether it's formal, casual, or themed (e.g., weddings, birthdays, holidays).
- **Use the Right Tools**
 - ✓ Use appropriate tools such as piping bags, nozzles, offset spatulas, stencils, and decorating combs for precise results.
 - ✓ Ensure all tools are clean and dry before use to maintain hygiene and a professional finish.
- **Work with Fresh Ingredients**
 - ✓ Use fresh and high-quality ingredients like fruits, creams, chocolate, and nuts to enhance both aesthetics and taste.
- **Temperature Control**
 - ✓ Ensure the pastry has cooled completely before decorating to prevent melting or slipping of icings and toppings.
- **Storing conditions for advanced breads and pastries**
 - ✓ Store pastries in airtight containers or resealable plastic bags to prevent exposure to air, which can cause them to become stale.
 - ✓ Control the Storage Temperature
 - ✓ Use Proper Storage Containers



Self-Reflection

1. Fill in the self-assessment table below to evaluate your knowledge, skills, and attitudes following completion of this unit.
 - a. There are no correct or incorrect responses in this assessment. It serves as a tool for your personal reflection on the acquisition of knowledge, skills, and attitudes during the learning process.

- b. Consider the following: Do you believe you possess the necessary knowledge, skills, or attitudes to perform the task? To what extent?
- c. Review the statements provided and indicate your level of knowledge, skills, and attitudes by placing a checkmark in the appropriate column.
- d. Read the statements across the top. Put a check in a column that best represents your level of knowledge, skills and attitudes.

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
Identify ingredients for decorating advanced breads and pastry products					
Describe types of pastry decorating tools.					
Describe techniques for storing advanced bread and pastry					
Apply pastry arts					
Apply wrapping and labeling techniques for advanced breads and pastry products					
Apply storing techniques for advanced breads and pastry products					
Perform Mise en place of ingredients					

My experience	I do not have any experience doing this.	I know a little about this.	I have some experience doing this.	I have a lot of experience with this.	I am confident in my ability to do this.
Knowledge, skills and attitudes					
tools and equipment needed to decorate advanced pastry products.					
Show Teamwork and Collaboration spirits.					
Be Innovative and Creative in presentations of pastry products					
Be tidy and organized throughout tasks					
Be Honest in measuring, portioning and mixing ingredients.					

2. Fill in the table above and share results with the trainer for further guidance.

Areas of strength	Areas for improvement	Actions to be taken to improve
1.	1.	1.
2.	2.	2.
3.	3.	3.



Summative assessment

Integrated/Summative assessment

Integrated situation

Canabella hotel located in Huye District is hosting 2 delegates from RDB having a meeting at your hotel. They have ordered sour bread, Gluten free breads, on their breakfast, vanilla Panna cotta and coffee opera Cake on their dessert. The hotel does not have an experienced pastry chef, and you are appointed to work as pastry chef and you are tasked to prepare and present the above orders within 3 hours.

All equipment, material tools and Consumables are available in **Canabella** hotel kitchen.

Resources

Tools	Measuring tools, Mixing tools, cooking tools, Presentation tools, Forks, spoons, plates, tongs, presentation bowls, knives Baskets, Pails/Rack, Serving boards, Tongs, Serving dish, baking trays, decoration tools, brushes , Rolling pins, scoopers, scrapers, pastry cutters, pastry docker , pastry bags, spatula, cups, scales, baskets, Sauce pans , Mixing bowls, containers, Decorating combs, pastry mats, Cake levellers
Equipment	Dough Mixer, Oven, Proofer, Refrigerator, Working tables, Toaster , Storing shelves, rolling machine , dough divider machine, trolley , breads slicer, dough sheeter, machine , proving cabinet, blast chiller, display cases, Cake decorating Turn tables, stoves , Gaz cooker.
Materials/ Consumables	White sugar, honey, butter milk, cooking oils, vanilla extract, baking soda, white vinegar, cassava flour, eggs, dark chocolate, fresh cream, egg white, apple cider vinegar, Kinazi Cassava Flour, whole chia seeds, milk, gelatine powder, baking powder, sugar, salt , Mangoes, coffee, butter, icing sugar, glucose syrups.

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