GURU KASHI UNIVERSITY

Diploma in Culinary Arts

Session: 2025-26

Department of Hotel Management

Faculty of Management & Commerce

Diploma Attributes of the Programme: -

Type of learning outcomes	**The Learning Outcomes Descriptors**
Graduates should be able to demonstrate the acquisition of:	
Learning outcomes that are specific to disciplinary/interdisciplinary areas of learning	Appling Cooking techniques, food preservation methods, and hygiene protocols (e.g., HACCP, proper sanitation) to produce safe, high-quality baked goods and preserved foods while ensuring compliance with food safety regulations.
	Synthesizing Food science, nutrition, and food costing principles to develop nutritious, profitable menus that meet dietary needs and optimize ingredient use through accurate cost calculations (e.g., AP/EP yields).
	Implementing store management practices (e.g., FIFO inventory, stock rotation) and first aid skills to maintain efficient, safe food service operations, minimizing waste and responding effectively to workplace emergencies.
Generic learning outcomes	Analyzing complex challenges, such as ingredient shortages or safety hazards, and devise creative, evidence-based solutions using interdisciplinary knowledge from food science, hygiene, and management.
	Collaborate effectively in kitchen teams and communicate food safety, nutritional, and operational information clearly to colleagues and customers.
	Adaption to dynamic Food Service environments, adhering to ethical standards and regulatory requirements while managing time and tasks efficiently under pressure.

Programme Learning outcomes:

Element of the Descriptor	**Programme learning outcomes relating to the Diploma**
The graduates should be able to demonstrate the acquisition of:	
Knowledge and Understanding	Fundamental knowledge of Food production operations in hospitality settings.
	Understanding of Nutrition, Food science, and environmental practices relevant to hospitality and guest well-being.
	Basics of Grooming skills for professional interactions.
	Familiarity with Store management needed for hospitality operations.
General, technical and professional skills required to perform and accomplish tasks	Practical skills in Food production operations through hands-on training.
	Effective use of Food preservation techniques for operational efficiency.
	Development of personality, grooming, and communication skills for guest-facing roles.
Application of knowledge and skills	The ability to apply foundational hospitality knowledge and soft skills to perform tasks in real or simulated hotel environments.
Generic learning Outcomes	Basic problem-solving, teamwork, and interpersonal skills required to function in hospitality service environments.
Constitutional, humanistic, ethical, and moral values	An understanding of human values, environmental responsibility, and professional ethics in the context of hospitality.
Employability and job-ready skills, and entrepreneurship skills and capabilities/qualities and mindset	The essential job-ready skills and work attitude required for entry-level roles in hospitality operations, with an emerging understanding of entrepreneurial thinking.
Credit requirements	Completion of required credits as per the National Higher Education Qualifications Framework (NHEQF) Level 4, covering core subjects and practical training. Total Credits required are 40.
Entry requirements	Completion of High School (10^{th}) or higher with minimum 45% with English as a compulsory subject.

Program Structure

SEMESTER – 1st									
Course Code	**Course Title**	**Type of Courses**	**L**	**T**	**P**	**No. of Credits**	**Int.**	**Ext.**	**Total Marks**
DCL101	Basics of Food Production	Major	4	0	0	4	30	70	100
DCL102	Store Management	Major	0	0	8	4	30	70	100
DCL103	Hygiene and Sanitation	MDSC	4	0	0	4	30	70	100
DCL104	Food Science and Nutrition	MDSC	3	0	0	3	30	70	100
DCL105	Basics of Food Production (Practical)	SEC	3	0	0	3	30	70	100
DCL106	Basics of First AID	SEC	2	0	0	2	30	70	100
Total			**16**	**0**	**08**	**20**	**180**	**420**	**600**

SEMESTER – 2nd									
Course Code	**Course Title**	**Type of Courses**	**L**	**T**	**P**	**No. of Credits**	**Int.**	**Ext.**	**Total Marks**
DCL201	Advance Food Production Operations	Major	4	0	0	4	30	70	100
DCL202	Food Costing	Major	0	0	8	4	30	70	100
DCL203	Commodities	Major	4	0	0	4	30	70	100
DCL204	Principles of Food Preservation	Minor	3	0	0	3	30	70	100
DCL205	Advance Food Production Operations (Practical)	SEC	3	0	0	3	30	70	100
DCL206	Food Safety and Quality	SEC	2	0	0	2	30	70	100
Total			**16**	**0**	**08**	**20**	**180**	**420**	**600**
Sub Total			**32**	**0**	**16**	**40**	**360**	**840**	**1200**

After completion of 2nd Semester, the student will undergo an On-the-Job Training in hotel in the Food Production Department for a duration of 6 months and submit the certificate of completion in the University.

Semester – I

Course Title: Basics of Food Production	L	T	P	Cr.
Course Code: DCL101	4	0	0	4

Total Hours: 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Understand the origin and structure of the food production department in hotels and catering establishments.
2. Explain the principles and objectives of cooking and the classification of raw materials.
3. Apply basic cooking methods and techniques to various food categories including meat, fish, vegetables, and eggs.
4. Prepare basic sauces and soups, understanding their classification, ingredients, and garnishes.

Course Content

Unit-I **18 Hours**

Introduction to Food Production Department

Origin of hotel industry Importance of kitchen in Hotel & Catering establishments Aims and objectives of Cooking Classification of raw materials, preparation of ingredients. Methods of mixing foods, effect of heat on various foods, weighing and measure, texture of food, Methods of cooking with special Application to meat, fish, vegetables, cheese, pulses and egg. Conventional and non-conventional methods of cooking, solar cooking, microwave cooking, fast food operation. Basic culinary terms.

Unit-II **14 Hours**

Basic Principles of Cookery

Texture of food, Properties of food, Food and Colour, Leavening agents, Selection and identification of varieties of vegetables, meat, fish, Cuts of: Chicken, beef, pork, fish and vegetables.

Food preservation techniques, Vegetables, Poultry and Game.

Unit-III **14 Hours**

Eggs

Structure, selection of quality, various ways of cooking eggs with example in each method and prevention of blue ring formation.

Varieties of fish, meat and vegetables. Accompaniments, garnishes and réchauffé, Re-heating of food.

Unit-IV **14 Hours**

Stock and Sauces

Definition of Stock, White Stock, Brown Stock, Fish Stock, Fungi Stock, Emergency Stock

Definition of Sauces: Béchamel sauce, tomato sauce, Velouté sauce, espagnole sauce, Hollandaise and mayonnaise sauce with derivatives and the necessary precautions to be observed while preparing these.

Transactional Mode:

Video Based Teaching, Panel Discussion, Case Based Teaching, Brain Storming, Demonstration, Peer Teaching.

Suggested Reading:

- *Roday, S. (2012). Food Production Operations (4th ed.). Tata McGraw-Hill Education.*
- *Kinton, R., & Ceserani, V. (2012). The Theory of Catering (13th ed.). Hodder Education.*
- *Corriher, S. O. (2011). Cookwise: The Hows and Whys of Successful Cooking. William Morrow Cookbooks.*
- *Davis, S., & Gisslen, W. (2015). Professional Cooking (8th ed.). Wiley.*
- *Boulter, M. (2014). Food and Beverage Production (8th ed.). Hodder Education.*

Course Title: Store Management	L	T	P	Cr.
Course Code: DCL102	4	0	0	4

Total Hours: 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the fundamental concepts and significance of store management in the hospitality industry.
2. Apply inventory control techniques to maintain optimal stock levels and minimize losses.
3. Demonstrate effective procurement procedures and vendor management strategies.
4. Implement inventory control methods and reduce pilferage and waste.

Course Content

UNIT-I **16 Hours**

Introduction to Store Management

Definition, Concept and Importance of Store Management, Types of Stores: Centralized and decentralized, Dry stores, cold storage, and bonded stores, Store Layout and Design, Space utilization, Store Documentation: Requisition forms, Bin cards and stock registers.

UNIT-II **16 Hours**

Inventory and Stock Control

Introduction to inventory, Objectives and importance, Types of inventories: raw materials, work-in-progress, finished goods, Stock Control Techniques: ABC analysis, Economic Order Quantity (EOQ), Just-In-Time (JIT) inventory, Stock Taking and Verification, Loss Prevention, Waste management.

UNIT-III **15 Hours**

Procurement and Vendor Management

Introduction to purchasing, Purchasing Procedures, Vendor Selection and Evaluation, maintaining supplier relationships, Receiving and Inspection, Storage and Issuing: FIFO and LIFO methods, Issuing procedures and documentation.

UNIT-IV **13 Hours**

Documentation, Cost Control & Store Audit

Essential store records: Purchase Order (PO), GRN, Stock Card, Issue Slips, Budgeting and forecasting in store planning, Cost control practices related to stores, Internal and external audits: purpose, process, and documentation, Legal compliance, safety standards, and quality assurance, Software tools for store management

Transactional Mode:

Team Teaching, Project Based Teaching, Brain Storming, Demonstration based analysis.

Suggested Reading:

- *Gopalakrishnan, P., & Sundaresan, M. (2009). Materials management: An integrated approach (2nd ed.). PHI Learning.*
- *Sharma, D. D. (2010). Purchasing and store management (3rd ed.). Himalaya Publishing House.*
- *Dobler, D. W., & Burt, D. N. (1996). Purchasing and supply management: Text and cases (6th ed.). McGraw-Hill Education.*
- *Arnold, J. R. T., Chapman, S. N., & Clive, L. M. (2011). Introduction to materials management (7th ed.). Pearson Education.*
- *Bowersox, D. J., Closs, D. J., & Cooper, M. B. (2010). Supply chain logistics management (3rd ed.). McGraw-Hill Education*

Course Title: Hygiene and Sanitation	L	T	P	Cr.
Course Code: DCL103	3	0	0	3

Total Hours: 45

Learning Outcomes: After completion of this course, the learner will be able to:

1. Explain the types of microorganisms relevant to food microbiology and their roles in food contamination and spoilage.
2. Demonstrate safe food handling practices across all stages of food preparation and apply personal hygiene standards.
3. Interpret the principles of HACCP and describe the role and compliance standards of FSSAI in food safety regulation.
4. Classify types of waste and evaluate appropriate methods of garbage disposal in accordance with municipal laws and sanitation guidelines.

Course Content

Unit-I **12 Hours**

Food Microbiology and Food Contamination and Spoilage

Introduction, Microorganism groups important in food microbiology - Viruses - Bacteria - Fungi (Yeast & Molds) - Algae – Parasites, Factors affecting the growth of microbes, Beneficial role of Microorganisms, Classification of Food, Contamination and Cross Contamination, Spoilages of Various Food with the Storing Method

Unit-II **12 Hours**

Sanitary Food Handling and Safe Food Handler

Receiving, Storage, Preparation, Cooking, Holding, and Service of food, Food handler: Personal Hygiene discussing all the standard, Hand Washing Procedure, First Aid definition, types of cuts, wounds, lacerations with reasons and precautions.

Unit-III **11 Hours**

Hazard Analysis Critical Control Point and FSSAI

Introduction to HACCP, History of HACCP, Principles of HACCP, HACCP plan development and implementation, Introduction to FSSAI, Role of FSSAI, FSSAI Compliance, Integration of HACCP with FSSAI regulations.

Unit-IV **10 Hours**

Garbage Disposal

Types of garbage, Types of bins, Methods of garbage disposal, Advantages and disadvantages, Municipal Laws and Swachh Abhiyan, Importance of garbage disposal, Sustainable practices, Waste management.

Transactional Mode:

Video Based Teaching, Panel Discussion, Case Based Teaching, Brain Storming, Demonstration, Peer Teaching.

Suggested Reading:

- *Jay, J. M., Loessner, M. J., & Golden, D. A. (2005). Modern food microbiology (7th ed.). Springer Science+Business Media.*
- *Forsythe, S. J. (2020). The microbiology of safe food (3rd ed.). Wiley-Blackwell.*
- *Frazier, W. C., & Westhoff, D. C. (1995). Food microbiology (4th ed.). McGraw-Hill Education.*
- *Marriot, N. G., & Gravani, R. B. (2006). Principles of food sanitation (5th ed.). Springer.*
- *Motarjemi, Y., & Lelieveld, H. L. M. (Eds.). (2014). Food safety management: A practical guide for the food industry. Academic Press.*

Course Title: Food Science and Nutrition	L	T	P	Cr.
Course Code: DCL104	3	0	0	3

Total Hours: 45

Learning Outcomes: After completion of this course, the learner will be able to:

1. Define food, nutrition, and the essential physiological, psychological, and social roles of food in human life.
2. Classify and differentiate macro- and micro-nutrients based on their functions, sources, and health implications
3. Evaluate the effects of nutrient deficiencies and excesses on human health.
4. Demonstrate awareness of nutrient preservation techniques during food storage, preparation, and cooking.

Course Content

UNIT-I **12 Hours**

Basic Concepts of Nutrition

Definition of Food and Nutrition, Importance of Food - Physiological, - Psychological and – Social, Functions of food, Classification of nutrients, Macro-nutrients, Micro-nutrients.

UNIT-II **12 Hours**

Macro-Nutrients

Carbohydrates: Functions of Carbohydrates, Sources, Recommended Daily Allowances (RDA), Effects of Deficiency and excess intake of Carbohydrates, Fats: Functions of Fats, Sources Recommended Daily Allowances (RDA), Effects of Deficiency and excess intake of Fats, Proteins: Functions of Proteins, Sources, Recommended Daily Allowances (RDA), Effects of Deficiency and excess intake of Proteins, Water: Function, Source, Recommended Daily Allowance (RDA)

UNIT-III **11 Hours**

Micro-Nutrients

Vitamins: Functions, sources, Recommended Daily Allowances (RDA) and Effects of Deficiency / Excess intake of; Vitamins of B-Complex Group, Vitamin C, Vitamin A, Vitamin D, Vitamin E, Vitamin K, Minerals: Functions, Sources, Recommended Daily Allowances (RDA) and Effects of Deficiency / excess intake of;

Calcium, Iron, Iodine, Sodium, Phosphorous

UNIT-IV **10 Hours**

Conserving Nutrients and Balanced Diet

During Storing, During Food Preparation (Pre-cooking e.g. Washing, Peeling, Cutting, Chopping, Slicing, Pounding, Grinding, Soaking, Sprouting, Fermentation, Mixing), During Cooking, Definition and its importance, Factors Affecting Balanced Diet (Age, Gender and Physiological state)

Transactional Mode:

Video Based Teaching, Panel Discussion, Case Based Teaching, Brain Storming, Demonstration, Peer Teaching.

Suggested Reading:

- *Swaminathan, M. (2012). Handbook of food and nutrition (5th ed.). Bangalore Printing and Publishing Co.*
- *Srilakshmi, B. (2019). Dietetics (7th ed.). New Age International Publishers.*
- *Mudambi, S. R., & Rajagopal, M. V. (2007). Fundamentals of foods, nutrition and diet therapy (5th ed.). New Age International Publishers.*
- *Bamji, M. S., Krishnaswamy, K., & Brahmam, G. N. V. (2009). Textbook of human nutrition (3rd ed.). Oxford & IBH Publishing.*

Course Title: Basics of Food Production (Practical)	L	T	P	Cr.
Course Code: DCL105	0	0	8	4

Total Hours: 120

Learning Outcomes: After completion of this course, the learner will be able to:

1. Identify and correctly use basic kitchen tools, equipment, and knives.
2. Demonstrate proper cleaning, care, and maintenance of kitchen equipment.
3. Select and handle vegetables, meats, and other ingredients appropriately.
4. Apply various cooking methods to prepare stocks, soups, sauces, eggs, and vegetables.

Course Content

1. **Familiarization with Kitchen Equipment:**
   - Types of utensils
   - Types of knives
   - Types of ladles
   - Types of gas ranges
2. **Care and Cleaning of Equipment:**
   - Importance of sanitation and hygiene
   - Care, cleaning of Kitchen equipment
   - Gas range cleaning and maintenance
   - Kitchen etiquettes, Practices and Knife handling
3. **Identification and Selection:**
   - Vegetables
   - Fish
   - Meat
   - Ingredients
     - Qualitative
     - Quantitative
4. **Cuts:**
   - Vegetables
   - Fish
   - Meat
5. **Basic Cooking Methods:**
   - Dry
   - Moist

- Combination

6. Preparation of Stocks:

- White stock
- Brown stock
- Fish stock
- Fungi stock

7. Preparation of Sauces:

- Béchamel sauce
- Veloute sauce
- Tomato sauce
- Espagnole sauce
- Hollandaise sauce
- Mayonnaise sauce

8. Egg Cookery:

- Boiled
- Fried
- Poached
- Scrambled
- Omelette
- En Cocotte

Transactional Mode:

Demonstration, Role-Play, Workshops, Industrial visits, Stimulations, Video-Based teaching.

Suggested Reading:

- *Gisslen, W. (2018). Professional cooking (9th ed.). John Wiley & Sons.*
- *Raina, R., Chopra, R., & Sidhu, B. (2019). Basic food preparation: A complete manual (4th ed.). Orient Blackswan.*
- *Bali, P. (2009). Food production operations. Oxford University Press.*
- *Kinton, R., Ceserani, V., & Foskett, D. (2012). Theory of catering (11th ed.). Hodder Education.*

Course Title: Basics of First AID	L	T	P	Cr.
Course Code: DCL106	3	0	0	3

Total Hours: 45

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate knowledge of the fundamental principles and legal aspects of first aid in emergency situations.
2. Perform basic life support techniques including CPR and use of an AED on adults, children, and infants.
3. Apply appropriate first aid procedures for common injuries such as bleeding, burns, fractures, and choking.
4. Identify and manage medical emergencies and environmental conditions using correct first aid interventions.

Course Content

Unit-I **12 Hours**

Introduction to First Aid and Basic Principles

Definition and importance of first aid, Objectives and principles of first aid, Responsibilities and qualities of a first aider, Legal and ethical aspects of first aid, Basic human anatomy and physiology relevant to first aid, First aid kit: contents and maintenance

Unit-II **12 Hours**

Emergency Assessment and Basic Life Support

Scene assessment and safety, Primary survey (DRABC): Danger, Response, Airway, Breathing, Circulation, Secondary survey: Head-to-toe examination, Cardiopulmonary Resuscitation (CPR) techniques for adults, children, and infants, Use of Automated External Defibrillator (AED), Recovery position and safe patient handling

Unit-III **11 Hours**

First Aid for Common Injuries and Conditions

Treatment of bleeding and wounds (types, control of bleeding, bandaging), Burns and scalds: types, degrees, and first aid management, Fractures, dislocations, and sprains: recognition and immobilization, Head injuries and spinal injuries: signs, symptoms, and precautions, Choking and airway obstruction, Shock: types, symptoms, and first aid management

Unit-IV **10 Hours**

First Aid for Medical Emergencies and Environmental Conditions

First aid for heart attack, stroke, seizures, diabetic emergencies, Poisoning: types, symptoms, and first aid measures, Heat exhaustion, heat stroke, hypothermia, and frostbite, Allergic reactions and anaphylaxis: recognition and treatment, Bites and stings (animal, insect), Role of emergency services and preparing for transfer

Transactional Mode:

Video Based Teaching, Panel Discussion, Case Based Teaching, Brain Storming, Demonstration, Peer Teaching.

Suggested Reading:

- *American Red Cross. (2017). First aid/CPR/AED participant's manual (7th ed.). American Red Cross.*
- *Eames, J., & Lambert, M. (2019). First aid manual: The step-by-step guide for everyone. Dorling Kindersley.*
- *Kitching, S. (2020). Essentials of first aid and emergency care (3rd ed.). Cengage Learning.*
- *Harris, J., & Winslow, K. (2018). Basic first aid and CPR techniques. McGraw-Hill Education.*

Semester – II

Course Title: Advance Food Production Operations	L	T	P	Cr.
Course Code: DCL201	4	0	0	4

Total Hours: 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Demonstrate preparation and classification of soups, gravies, and sauces.
2. Apply appropriate techniques in handling vegetables, fruits, and salads.
3. Perform basic larder and butchery operations.
4. Prepare Indian regional dishes using traditional methods.

Course Content

UNIT-I **16 Hours**

Soups and Gravies

Soups: Definition, Classification of soups, International Soups, Soup garnishes, Thick Soup, Thin soup, Clear soup, Cold soup, Warm soup.

Introduction to gravies, Different Indian gravies, Sauces v/s Gravies.

UNIT-II **16 Hours**

Vegetables, Fruits and Salads

Introduction to vegetables and fruits, Classification of vegetables and fruits, Colours and pigmentation, Effect of heat on different vegetables, Reaction with metals, Methods of cooking vegetables.

Hors d' oeuvre and salads: Definition, Classification and Types, Salad Dressings, Garnishes.

UNIT-III **14 Hours**

Larder and Butchery

Introduction, Larder organization and layout. Larder control-maintenance and care of larder equipment, Larder work: Functions and management, Larder control. Fish – classification, cleaning, basic cuts and uses and storage, Poultry and game-classification preparation and cuts with uses, decorative work with ice, vegetable, butter/fat and fruit.

Introduction, cuts of beef, lamb, mutton and pork-uses and weights, Types of force meat and uses, Assembling cold buffet, sandwiches and canapés, Cleaning and care of butchery equipment and tools,

UNIT-IV **14 Hours**

Indian Cookery

Introduction to Indian cookery, Mass cooking, Indian cooking methods, Condiment and spices in India, Cuisines of India, Special equipment in Indian cookery, Halwai section, Tandoor section, Indian breads.

Transactional Mode:

Video Based Teaching, Panel Discussion, Case Based Teaching, Brain Storming, Demonstration, Peer Teaching.

Suggested Reading:

- *Gisslen, W. (2018). Professional cooking (9th ed.). John Wiley & Sons.*
- *Labensky, S. R., Hause, A. M., & Martel, P. (2014). On cooking: A textbook of culinary fundamentals (5th ed.). Pearson.*
- *Foskett, D., Ceserani, V., & Campbell, J. (2012). The theory of catering (11th ed.). Hodder Education.*
- *Krishna Arora. (2008). Theory of cookery. Frank Bros & Co.*
- *Thangam, P. (2001). Modern cookery for teaching and the trade (Vol. 1). Orient Blackswan.*

Course Title: Food Costing	L	T	P	Cr.
Course Code: DCL202	4	0	0	4

Total Hours: 60

Learning Outcomes: After completion of this course, the learner will be able to:

1. Understand and define key costing terms and classifications.
2. Calculate and control food cost, portion cost, and yield percentages.
3. Develop standard recipes and menus with cost control mechanisms.
4. Analyze and apply pricing strategies for profitability.

Course Content

UNIT-I **16 Hours**

Introduction to Food Costing

Basic terminology: cost, food cost, selling price, gross profit, net profit, markup, margin, Types of costs: direct, indirect, fixed, variable, semi-variable, Objectives and importance of food costing in kitchen operations, Cost centres and profit centres, Understanding food cost percentage and break-even analysis.

UNIT-II **16 Hours**

Yield and Portion Control

Food loss and yield concepts, Standard portion size and portion control methods, Recipe yield test and butchery test, Conversion and shrinkage during cooking, Use of yield factors in pricing

UNIT-III **15 Hours**

Recipe Costing and Menu Pricing

Standard recipe cards (SRC): components and usage, costing recipes for à la carte and table d'hôte menus, Menu pricing strategies: gross profit method, contribution margin method, Calculating per-portion cost, plate cost, Impact of food waste and theft on costing

UNIT-IV **13 Hours**

Purchasing, Inventory, and Cost Control

Purchasing systems: centralized vs decentralized, Inventory control: methods (LIFO, FIFO, perpetual, physical), Cost control cycle: purchasing, receiving, storing, issuing, Waste and spoilage management, Daily and monthly food cost reports.

Transactional Mode:
Team Teaching, Project Based Teaching, Brain Storming, Demonstration based analysis.

Suggested Reading:

- *Davis, B., Lockwood, A., Alcott, P., & Saggerson, S. (2018). Food and beverage management (9th ed.). Routledge.*
- *Feinstein, A. H., & Stefanelli, J. M. (2012). Purchasing: Selection and procurement for the hospitality industry (8th ed.). Wiley.*
- *Dopson, L. R., & Hayes, D. K. (2015). Food and beverage cost control (6th ed.). Wiley.*
- *Bali, P. S. (2011). Food production operations. Oxford University Press.*

Course Title: Commodities	L	T	P	Cr.
Course Code: DCL203	3	0	0	3

Total Hours: 45

Learning Outcomes: After completion of this course, the learner will be able to:

1. Identify and classify commonly used food commodities.
2. Select commodities based on quality, seasonality, and use in recipes.
3. Understand the culinary applications and nutritional aspects of commodities.
4. Apply correct storage, handling, and preservation methods for kitchen ingredients.

Course Content

UNIT-I **12 Hours**

Introduction to Food Commodities

Definition and classification of food commodities, Importance in culinary operations, Factors affecting selection and quality of food commodities, Seasonality and sourcing (local vs imported), Food adulteration and food laws (intro to FSSAI standards)

UNIT-II **12 Hours**

Cereals, Pulses, and Flours

Cereals: Rice, wheat, barley, maize, oats – types, uses, and processing, Pulses and legumes: Classification, nutritional value, soaking/sprouting, cooking, Flours: Wheat flour (refined, whole), rice flour, besan, maize flour – properties and culinary uses, Fermentation in cereal-based dishes, Storage and shelf life

UNIT-III **11 Hours**

Dairy, Eggs, Fats, and Oils

Milk and milk products: Types, processing (pasteurization, homogenization), cream, butter, curd, cheese, ghee, Eggs: Structure, grading, testing freshness, uses in cookery, Fats and oils: Classification (animal vs plant), smoking points, role in cooking, rancidity, Vegan dairy and oil alternatives, Handling and storage precautions

UNIT-IV **10 Hours**

Meat, Fish, Poultry, Spices, and Convenience Foods

Meat: Types, selection, cuts, tenderness, storage, Poultry: Types,

selection criteria, culinary uses, Fish and seafood: Classification (white/oily, shellfish), freshness indicators, storage, Spices and condiments: Indian and global – classification, functions in food, correct usage, Convenience foods: Types (canned, frozen, dried, instant), advantages/disadvantages, usage in kitchens, Label reading and basic food laws applicable to commodities

Transactional Mode:

Team Teaching, Project Based Teaching, Brain Storming, Demonstration based analysis.

Suggested Reading:

- *Thangam, P. (2001). Modern cookery for teaching and the trade (Vol. 1). Orient Blackswan.*
- *Sethi, M., & Balachandran, M. (2011). Food science and nutrition. New Age International.*
- *Krishna Arora. (2008). Theory of cookery. Frank Bros & Co.*
- *Frazier, W. C., & Westhoff, D. C. (2008). Food microbiology (4th ed.). McGraw-Hill.*

Course Title: Principles of Food Preservation	L	T	P	Cr.
Course Code: DCL204	3	0	0	3

Total Hours: 45

Learning Outcomes: After completion of this course, the learner will be able to:

1. Understand the causes of food spoilage and the need for preservation.
2. Describe the principles behind major food preservation techniques.
3. Apply different preservation methods to various food products.
4. Evaluate the effects of preservation on the quality and safety of food.

Course Content

UNIT-I **12 Hours**

Introduction to Food Preservation

Importance and objectives of food preservation, Factors affecting food spoilage: microbial, enzymatic, chemical, and physical, Classification of preservation methods, Basic terminology: shelf life, perishability, stability.

UNIT-II **12 Hours**

Low Temperature Preservation

Refrigeration and chilling: principles, equipment, applications, Freezing and deep freezing: methods (blast freezing, plate freezing, cryogenic), effects on food, Storage practices and thawing techniques, Cold chain management

UNIT-III **11 Hours**

High Temperature and Chemical Preservation

Thermal processing: pasteurization, sterilization, canning, bottling, Drying and dehydration: sun drying, mechanical drying, freeze-drying, Use of preservatives: natural and synthetic, Salting, smoking, pickling, and sugar preservation

UNIT-IV **10 Hours**

Traditional Methods of Food Preservation

Salt Preservation, Sugar Preservation, Oil Preservation, Vinegar and Acid Preservation, Natural Fermentation, Smoking, Drying Under Sun, Underground Storage and Root Cellars

Transactional Mode:
Team Teaching, Project Based Teaching, Brain Storming, Demonstration based analysis.

Suggested Reading:

- *Potter, N. N., & Hotchkiss, J. H. (2012). Food science (5th ed.). Springer.*
- *Fellows, P. J. (2016). Food processing technology: Principles and practice (4th ed.). Woodhead Publishing.*
- *Manay, S., & Shadaksharaswamy, M. (2008). Foods: Facts and principles (2nd ed.). New Age International.*
- *Sivasankar, B. (2002). Food processing and preservation. Prentice Hall India.*
- *Ranganna, S. (2012). Handbook of analysis and quality control for fruit and vegetable products (2nd ed.). Tata McGraw Hill.*

Course Title: Advance Food Production Operations (Practical)	L	T	P	Cr.
Course Code: DCL205	0	0	8	4

Total Hours: 120

Learning Outcomes: After completion of this course, the learner will be able to:

1. Identify and prepare various national and international soups with correct garnishes and service standards.
2. Execute foundational techniques in preparing salads, potatoes, and vegetable dishes using diverse cooking methods.
3. Prepare a variety of composed fruit dishes and international salads with appropriate presentation skills.
4. Demonstrate fundamental butchery skills, including the preparation and portioning of fish, poultry, and meat, and assemble cold buffet items.

Course Content

1. **Preparation Soups:**
   - Purees
   - Cream
   - Veloute
   - Broths
   - Bisques
   - Consommés
   - Cold Soups
   - International soups
2. **Basic Preparations:**
   - Salads
     - Cole Slaw
     - Potato
     - Green
     - Fruit
   - Potato
     - Baked potato
     - Mashed potato
     - French fries
     - Roasted potatoes
     - Boiled potatoes

    - Allumettes
- Vegetable
    - Boiled
    - Glazed
    - Fried
    - Stewed

3. Fruits & Salads:

- Segmenting, compote, fruit salads, dessert garnishes
- Salads:
    - Coleslaw
    - Russian
    - Waldroff
    - Cesar
    - Kimchi
    - Nicoise
    - Tossed and sprouted

4. Larder & Butchery:

- Fish and poultry handling
    - Cleaning
    - Different cuts
    - Portioning
    - Butcher poultry
- Meat butchery
    - Cuts of beef
    - Cuts of lamb
    - Cuts of pork
    - Preparation of steaks
    - Escalopes
- Cold buffet
    - Sandwiches
    - Canapes
    - Cold cuts of meat

5. Indian Cookery:

- Indian Gravies
    - Makhani
    - Brown
    - White
    - Yellow
    - Red
    - Green
- Indian Cuisine
    - Bengali Cuisine

    - Rajsthani Cuisine
    - Kashmiri Cuisine
    - Punjabi Cuisine
    - Goan Cuisine
    - Hyderabadi Cuisine
    - Northeastern Cuisine
- Tandoor
    - Indian Starters
    - Indian Breads
- Halwai
    - Moong Dal Halwa
    - Gajar Halwa
    - Rasogulla
    - Rasmalai
    - Shahi Tukda
    - Phirni
    - Gulab Jamun

Transactional Mode:

Demonstration, Role-Play, Workshops, Industrial visits, Stimulations, Video-Based teaching.

Suggested Reading:

- *Gisslen, W. (2018). Professional cooking (9th ed.). John Wiley & Sons.*
- *Labensky, S. R., Hause, A. M., & Martel, P. (2014). On cooking: A textbook of culinary fundamentals (5th ed.). Pearson.*
- *Foskett, D., Ceserani, V., & Campbell, J. (2012). The theory of catering (11th ed.). Hodder Education.*
- *Krishna Arora. (2008). Theory of cookery. Frank Bros & Co.*
- *Thangam, P. (2001). Modern cookery for teaching and the trade (Vol. 1). Orient Blackswan.*

Course Title: Food Safety and Quality	L	T	P	Cr.
Course Code: DCL206	3	0	0	3

Total Hours: 45

Course Learning Outcomes: After completion of this course, the learner will be able to:

1. Understand the causes and prevention of food contamination and spoilage.
2. Apply hygienic practices and sanitation standards in food preparation.
3. Interpret national and international food safety laws and regulations.
4. Identify quality control and assurance procedures in food production.

Course Content

Unit-I **12 Hours**

Introduction to Food Safety and Hygiene

Definition of food safety, hygiene, and sanitation, Importance of food safety in commercial kitchens, Types of food hazards: biological, chemical, and physical, Sources and prevention of contamination, Personal hygiene and hygienic handling of food, Cleaning, disinfection, and pest control in kitchens

Unit- II **12 Hours**

Foodborne Illnesses and Spoilage

Foodborne infections and intoxications: causes, symptoms, prevention, Major microorganisms: bacteria (Salmonella, E. coli), viruses, fungi, parasites, Food spoilage: signs, causes, and prevention, Safe food storage practices (temperature control, FIFO, labelling), Role of preservatives and additives

Unit- III **11 Hours**

Food Safety Laws and Regulatory Framework

Introduction to FSSAI (India) and Food Safety and Standards Act, 2006, Codex Alimentarius, WHO, FDA (overview of international laws), Food labeling regulations, Licensing and inspection protocols, Penalties for non-compliance

and consumer protection laws

Unit- IV **11 Hours**

Food Quality Control and Management Systems

Concept of food quality: sensory, nutritional, and microbiological aspects, Quality control vs quality assurance, HACCP (Hazard Analysis and Critical Control Points): principles and implementation, ISO 22000 and other food safety management standards, Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP), Quality auditing and documentation

Transactional Mode:

Video Based Teaching, Panel Discussion, Case Based Teaching, Brain Storming, Demonstration, Peer Teaching.

Suggested Reading:

- *Marriott, N. G., & Gravani, R. B. (2006). Principles of food sanitation (5th ed.). Springer.*
- *Sprenger, R. A. (2020). Hygiene for management (20th ed.). Highfield International.*
- *Frazier, W. C., & Westhoff, D. C. (2008). Food microbiology (4th ed.). McGraw-Hill.*
- *Shakuntala, M. N., & Shadaksharaswamy, M. (2008). Foods: Facts and principles (2nd ed.). New Age International.*

On-the-Job Training

Course Content

1. Evaluation of Students for Professional Training

- A total training of 24 weeks in the Department of Food Production in Hotels, Restaurants, or QSR's.
- The student must maintain: -
    - Attendance/Punctuality
    - Proficiency in organizing departmental task
    - Initiative/responsibility
    - Interpersonal relations
    - Behavior/attitude

2. Submission Post Completion of Internship

- Training Completion Certificate
- Log-Book

Post the submission of Training Completion Certificate the student will be provided the Trade Diploma in Food Production.