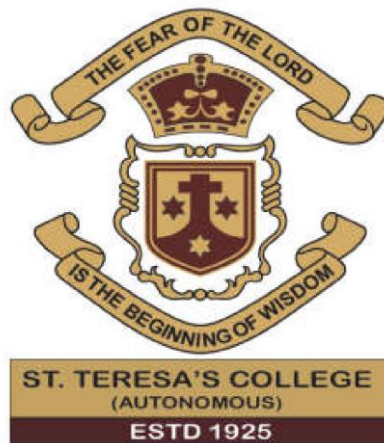


**ST. TERESA'S COLLEGE (AUTONOMOUS)
ERNAKULAM
(Affiliated to Mahatma Gandhi University, Kottayam)**



**CURRICULUM AND SYLLABUS FOR
DIPLOMA IN WELLNESS CRAFT BAKER**

**UNDER CREDIT & SEMESTER SYSTEM
(2020 Admissions)**

PROGRAMME SPECIFIC OUTCOME

PSO1. Prepare work area and process machineries for producing essential bakery products

PSO 2.Create healthy products by combining principles of nutrition and essential baking.

PSO3. Design and produce wellness bakery products as an entrepreneur, in artisan bakeries and patisseries.

PSO4. Carry out documentation , record keeping and communication related to the industry.

PSO5. Apply safety, hygiene and sanitation practices in the workplace.

PSO6. Supervise the production of essential baked products in industrial units.

SEMESTER I

PAPER NO.	PAPER TITLE	THEORY/ PRACTICAL	CREDITS	TOTAL NUMBER OF HOURS
1	English for Communication I	THEORY	5	90
2	Food and Nutrition for Health	THEORY	5	90
4	Bakery ingredients. Equipments and Workspace	THEORY	4	72
5	Food Safety and Hygiene	THEORY	4	72
5	Essential Bakery and Confectionary Practicals	PRACTICAL	5	90
6	Wellness Bakery Practicals	PRACTICAL	5	90
7	Food Safety and Hygiene (INTERNSHIP)	INTERNSHIP	2	

SEMESTER- I
GENERAL COURSE

VWC1G01D20 ENGLISH FOR COMMUNICATION-I

Credits : 5 Credits

Total Lecture Hours : 90

Course Outcome:

CO1: Create positive group communication exchanges and improve vocabulary and grammar. (Create)

CO2: Identify main ideas and supporting details in academic listening and presentation. (Understand)

CO3:Develop speaking ability in English both in terms of fluency and comprehensibility (Analyze)

CO4: Manage reading speed and comprehension of academic articles. (Analyze)

CO5: Illustrate skills in written and interpersonal communication. (Analyze)

CO6: Assess the different forms of communication to be applied according to required situations (Evaluate)

Mapping of Course Outcomes with Program Specific Outcomes

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	1	2	3	1	1
CO2	1	1	2	2	1	1
CO3	1	1	2	3	1	1
CO4	1	1	2	3	1	1
CO5	1	1	2	3	1	1
CO6	1	1	2	3	1	1

Syllabus Content

Module1: Learning English

15 hrs

The importance of English, uses of English; vocabulary-using a dictionary;
Synonyms; Antonyms

Module2:Essentials of English Grammar

25 hrs

Sentence- Types of Sentences- Phrases; Articles- Paragraph Writing – Topic Sentences, Supporting Sentences, Concluding Sentences - Parts of Speech- Noun, Verb, Adjectives, Tenses, Modal Auxiliaries, Prepositions, Conjunction – Punctuation - Passive and Active Voice - Reported Speech – Prefixes – Suffixes

Module 3 : Listening and Reading

20 hrs

Barriers to Listening – Academic Listening - Reading Stories – Reading Newspaper

Module 4 :Practicals

30 hrs

How to use a Dictionary - Listening Comprehension- Engaging in Conversations - Descriptive Writing

SEMESTER – I

GENERAL COURSE

VWC1G02D20 FOOD AND NUTRITION FOR HEALTH

Credits : 5

Total Lecture Hours : 90

Course Outcome:

CO 1: Identify the relationship between food, nutrition and health. (Understand)

CO 2: Interpret the role of food and nutrition in the bakery and hospitality industry. (Understand)

CO 3: Critically analyse healthy food groups which can be substituted in baked foods.(Analyze)

CO 4: Differentiate junk foods from healthy foods to design meaningful alterations in cuisine. (Understand)

Mapping of Course Outcomes with Program Specific Outcomes

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	2	2	2	1	1	1
CO2	2	3	3	1	1	1
CO3	2	3	3	1	1	1
CO4	2	3	3	1	1	1

Syllabus Content

Module 1: Introduction to Nutrition

20 Hours

Definition of nutrition and health, ICMR recommendations regarding food and Nutrient intake for Indians. Reference man and reference woman.

Role of a wellness Craft Baker. Wellness concept in Bakery and Hospitality industry.

Module 2: Role of Food in Health

20Hours

Definition of food, classification of food groups based on origin, nutritive value. Functions of foods. Food guide pyramid. Eat well plate. Balanced diet.

Recent concepts of food: Health Foods, Ethnic Foods, Organic Foods, Functional Foods, Nutraceuticals, Convenience Foods.

Module 3: Basic Food Groups

25 hrs

Basic Food groups - -Cereals and Millets -Pulses and Legumes -Eggs, Milk,Meat,Fish -Fruits and Vegetables-Fats and Sugars : Nutritive value, functional benefits.

Healthy substitutes in Baking-Flour substitutes; Sugar substitutes; Fat substitutes;

Concepts of Whole Food Plant Based Diets, Vegan diets, Lactose and gluten free foods.

Module 4: Ill effects of Junk Foods

25 hrs

Nutrition Transition-Global and Indian Scenario;Prevalence of NCDs-Obesity, Diabetes, CVD, Cancers

Concept of Junk Foods and Fast Foods-Role of junk foods in the development of Non Communicable diseases

Relationships between Food and Health-Perspectives and Evidences.

SEMESTER – I

SKILL COURSE

VWC1S01D20 BAKERY INGREDIENTS, EQUIPMENTS AND WORK SPACE

Credits : 4 credits

Total Lecture Hours : 72 Hrs

Course Outcomes:

CO 1: Describe the basic principles of baking

CO 2: Evaluate bakery ingredients and its effect on sensory parameters of baked foods.

CO 3: Analyse different methods of bread , biscuit and cake manufacture

CO 4: Design effective layouts of the different functional work areas

CO 5: Operate small and large equipment in bakery units

Mapping of Course Outcomes with Program Specific Outcomes

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	3	3	3	1	2	1
CO2	3	3	3	1	2	1
CO3	3	3	3	1	2	1
CO4	3	3	3	1	2	1
CO5	3	3	3	1	2	1

Syllabus Content

Module 1:History and Principles of Baking

10 hours

Historical background, Modern Technology, Professional requirements. Basic Baking Principles. Mixing and Gluten development. Processes that occur during mixing; Controlling gluten development; Methods for adjusting gluten development; The baking process.

Module 2: Bakery Ingredients

18 Hours

Wheat flour, Wheat varieties, Composition of wheat Flour ,Grades. Types of patent flour, Meals and starches, Other flours used in baking.

Sugars, Types, Syrups. Milk and milk products, Eggs, Leavening agents-yeast, chemical leaveners.

Food Additives used in Baking - Gelling agents; Fruits and Nuts, Chocolate and Cocoa, Salt, Spices and Flavorings.

Module 3: Principles of Bread manufacturing

15 Hours

Role of baking ingredients in improving the quality of bread. Types of yeast, fermentation of dough. Leavening agents, types of leavenings. Role of baking ingredients in improving the quality of bread. Bread improvers , Fillings and toppings .

Characteristics of flour used for making bread, biscuits and cakes. Understanding different types of bread ; Understanding different methods in bread making .

Ingredients used for bread manufacture, methods of mixing the ingredients, dough development methods - straight dough, sponge dough, moulding, proofing, baking, packing, spoilage, bread staling, methods to reduce bread staling and spoilage.

Module 4: Biscuit and Cake manufacturing

15 Hours

Processing of biscuits and cakes- Ingredients, development of batter, baking and packing, Spoilage in cakes and biscuits. Basic faults in Bread , Biscuit And Cake Baking.

Module 5: Organisation of Space and Equipment 14 hours

Design and layout of kitchen, service and storage areas - factors to be considered, Types of kitchens, Planning space and layout of work Centres. Kitchen Triangle, Unidirectional work flow.

Equipments - classification, factors affecting selection and purchase. Equipment safety and sanitation. Bakery work space Management.

SEMESTER – I

SKILL COURSE

VWC1S02D20 FOOD SAFETY AND HYGIENE

Credits : 4 credits

Total Lecture Hours : 72 Hrs

Course Outcomes:

CO 1:Apply principles of food safety and hygiene in bakery ingredient selection and storage

CO 2: Evaluate safe and unsafe food practices with respect to contaminants and toxicants

CO 3: Appraise the effect of natural toxic substances and additives in bakery products

CO 4: Implement quality control measures and HACCP protocol in a bakery unit.

Mapping of Course Outcomes with Program Specific Outcomes

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	2	1	1	1	3	3
CO2	2	1	1	1	3	3
CO3	2	1	1	1	3	3
CO4	2	1	1	1	3	3

Module 1: FOOD SAFETY AND QUALITY MANAGEMENT

16 hrs

Introduction to food safety- Food safety issues; physical, chemical and microbiological contaminants, Food safety system. Definitions and terminology in Quality Management Systems. The role of government and Food Industry in ensuring food safety, Recent initiatives in food safety.

Importance of Food Safety in Bakery; Responsibilities of Food Handlers; Economic consequences of food safety hazards .

Module 2: PHYSICAL AND CHEMICAL CONTAMINANTS

18 hrs

Metal, mineral, plant and animal contaminants. Safety evaluation of food ingredients. Major pathways by which chemical residues and contaminants enter the food chain. Agrochemicals and veterinary drugs, packaging materials, process equipment and ingredient impurities.

Module 3: NATURAL TOXIC SUBSTANCES & ADDITIVES 18 hrs

Mycotoxins , Plant toxins and toxic plants .The nature, properties and functions of various classes of food additives (colorants, flavours, sweeteners, thickening and gelling agents, and antioxidant preservatives). Radioactivity, residues as contaminants and residues from irradiation .

Module 4: MICROBIAL FOOD SAFETY AND HACCP 20 hrs

Microbial food safety: types of foodborne disease-Factors affecting Food Borne Disease Outbreak. Protozoa- *Cryptosporidium parvum*. Toxigenic fungi- mycotoxins of *Aspergillus*. Foodborne viruses- gastroenteritis viruses.

Control of Food Safety and Quality Management: Protecting public health and eliminating risk. Farm to table strategy and animal traceability. Good Manufacturing Practices (GMPs); Hazard Analysis and Critical Control Point (HACCP); Quality Management Systems: ISO 9000.

SEMESTER – I

SKILL COURSE

VWC1SP01D20 ESSENTIAL BAKERY AND CONFECTIONARY PRACTICALS

Credits : 5

Total Lecture Hours : 90 Hrs

Course Outcomes:

CO 1: Prepare work area and process machineries for producing baked products

CO 2: Prepare for production of basic baked products

CO 3: Produce baked products in artisan bakeries and patisseries.

CO 4: Apply safety, hygiene and sanitation practices in the workplace

Mapping of Course Outcomes with Program Specific Outcomes

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	3	3	3	2	3	3
CO2	3	3	3	2	3	3
CO3	3	3	3	2	3	3
CO4	3	3	3	2	3	3

Syllabus Content

1. Organoleptic Sensory Evaluation : (5 hrs)

Appearance, Taste, Flavour, Texture & Consistency (Firm & Close, short & crumbly, spongy, light & even, flaky, coarse, tough, hard, roping, pouring, soft peak, medium peak, stiff peak)

.Prepare sensory evaluation proforma.

2.Various types of Breads , Cookies, Cakes and Muffins:(70 hrs)

a. Yeast Bread

- Basic Bread Rolls (hard & soft rolls)
- Bread Stick
- French Bread & Bread Loaf

b. Enriched dough

- Brioche
- Cinnamon buns
- Doughnuts

c. International Breads

- Focaccia
- Lavash
- Pita
- Pizza Bread
- Ciabatta
- Cheese Bread
- Garlic Bread

d. Quick Breads

- Soda bread
- Cheese biscuits
- Herbed biscuits

Banana Breads

ies

ter Cookies

ocolate Chip Cookies

ndy Snaps

Box Cookies

iond Biscotti

onut Macaroons

nut Macaroons

lting moments

ocolate Brownies

f. Muffins

-Sweet and Savoury

g. Cakes

- Basic Sponge Cake
- Genoise Sponge Cake

- Pound Cake
- Lemon Cake
- Marble Cake
- Fruit Cake
- Eggless Cake
- Carrot cake, Banana cake

3)Visit to production unit of a bakery.(15 hrs)

SEMESTER – I SKILL COURSE
VWC1SP02D20 WELLNESS BAKERY PRACTICALS

Credits : 5 credits

Total Lecture Hours : 5 hours / week = 90 Hrs

Course Outcomes:

CO 1: Plan wellness baked product production by using healthy substitutes and healthy ingredients

CO 2: Prepare the ingredients and equipments for production of varieties of wellness baked products

CO 3: Develop and evaluate wellness bakery products

CO 4: Apply safety, hygiene and sanitation practices in the workplace

Mapping of Course Outcomes with Program Specific Outcomes

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	2	3	3	1	2	1
CO2	2	3	3	1	2	1
CO3	2	3	3	1	2	1
CO4	2	3	3	1	3	1

Module 1. Use of wellness ingredients and substitutes in Breads, Biscuits, Cookies, Muffins , Cakes and Pastries.(60 hrs)

a. Alternate flours :Whole wheat flour, Full bran rice flour, Jackfruit flour, Oats etc

b.Millets: Ragi, Quinoa etc

c. Seeds like water melon seeds, Sunflower seeds, Pumpkin seeds, Sesame seeds, Chia etc

d. Fat substitutes like Nuts and Oilseeds especially Coconut derived products.

e.White Sugar substitutes– Jaggery, Demerara sugar, Coconut sugar, Palm sugar ,dehydrated banana, Dates,dry fruits

f. Fruits and vegetables - Egg Fruit ,Monk Fruit, Star fruit, Chinese orange, Pumpkin, Carrots, Beetroot

g. Cocoa - nibs instead of processed Chocolate

Module 2: Sensory Evaluation and Product standardisation. (10 hrs)

Module 3. Individual Projects on ONE innovative Wellness bakery product to be developed by the student. Packaging, labelling and Sale of the product to be conducted individually (20 hrs)

SEMESTER – I

SKILL COURSE

VWC1SP03D20 FOOD SAFETY AND HYGIENE(INTERNSHIP)

Credits : 2 credits

Total hours : 72 Hrs

Course Outcomes:

CO 1: Get certified in Food Safety and Hygiene -HACCP level 1

CO 2: Acquire certificate in FSSAI FOSTAC I/II -Food Business operators training

CO 3: Organise training material as internship reports

Mapping of Course Outcomes with Program Specific Outcomes

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	3	1	1	3	3	3
CO2	3	1	1	3	3	3
CO3	3	1	1	3	3	3

Syllabus:

Module 1. Industrial training to acquire skills for management and implementation of HACCP (35 hrs)

Module 2. FSSAI FOSTAC I and II- Food Business operators training (35 hrs)

OR

Undergoes a certificate course in Food Safety and Hygiene for the same duration (70 hrs).

Module 3: Internship report of the training programmes . (2hrs)

