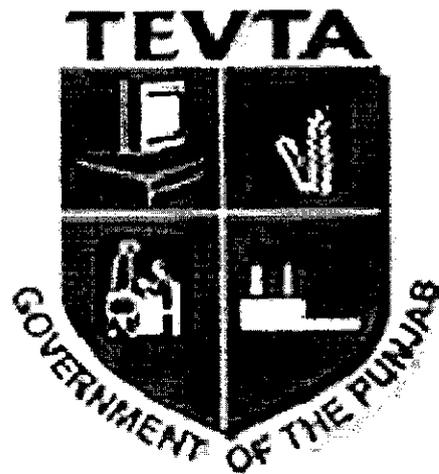


GOVERNMENT OF THE PUNJAB
TECHNICAL EDUCATION & VOCATIONAL
TRAINING AUTHORITY



CURRICULUM FOR
CONFECTIONERY, BAKING & SWEETS

(6 – Months Course)
Revised April 2016

APPROVED

Date: 7-4-16

Sign: 

CURRICULUM SECTION
ACADEMICS DEPARTMENT

96-H, GULBERG-II, LAHORE

Ph # 042-99263055-9, 99263064

gm.acad@tevta.gop.pk, manager.cur@tevta.gop.pk

TRAINING OBJECTIVES

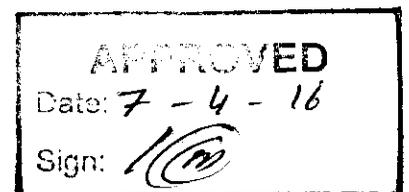
The food processing industry is considered to be one of the largest industrial sectors in Pakistan. It accounts for approximately 27 percent of total production and 16 percent of total employment in the manufacturing sector. Sweets and fast foods are becoming popular in present scenario due to change in food habits and life style.

The production of bakery & confectionery items, is not only meeting local demand but items are also being exported. The exports of sugar confectionery, chocolates and biscuits have shown a rapid growth during the last 10 years. This sector has vast opportunities to expand export especially to Europe and Middle East. Therefore, there exist tremendous scope of setting confectionery and food processing units to utilize indigenous raw materials and by exporting these products foreign exchange can be earned.

This curriculum is developed keeping in view the requirement of the market demand by more focusing on practical alongwith necessarily required theoretical knowledge and work ethics in order to produce semi-skilled workers who can carry out the operations of sweets, bakery and confectionery industry. This curriculum covers the major topics of types of sweets, their formulations, procedures, bakery items processing, preparation of confectionery items and their quality control along with Functional English and Information Technology.

CURRICULUM SALIENTS

Name of course	:	Confectionery, Baking & Sweets
Entry Level	:	Middle
Duration of Course	:	6 – Months
Total Training Hours	:	800 Contact Hours
Training Methodology	:	Practical 80%
	:	Theory 20%
Medium of Instruction	:	Urdu/English



SKILL COMPETENCY DETAILS

On successful completion of this course, the trainee should be able to:-

1. Prepare different types of sweets.
2. Evaluate of sweets quality
3. Handle related tools and equipments.
4. Prepare bakery products like bread, cakes, biscuits & pizza etc.
5. Prepare confectionery items like candies & chocolate
6. Control quality of products
7. Pack different sweets, bakery & confectionery items

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KNOWLEDGE PROFICIENCY DETAILS

On successful completion of this course, the trainee should be able to:-

1. Explain the types of sweets, bakery & confectionery products
2. Explain the role of different ingredients used
3. Describe unit operations of sweets, bakery & confectionery processing
4. Explicate how to utilize the important different tools and equipment required.
5. Explain the techniques of product evaluation



SCHEME OF STUDIES**Confectionery, Baking & Sweets
(6 – Months Course)**

S. No.	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Sweets processing	18	280	298
2.	Baking technology	20	180	200
3.	Confectionery technology	18	164	182
4.	I.T Fundamentals	8	32	40
5.	Functional English	16	64	80
Total		80	720	800

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DETAIL OF COURSE CONTENTS**Confectionery, Baking & Sweets
(6 – Months Course)**

Sr. No	Detail of Topics	Theory Hours	Practical Hours
1.	SWEETS		
1.1.	Introduction (Khoaya based & Paneer based)	2	-
1.2.	Ingredients used in sweets	2	10
1.3.	Preparation of khoaya, Paneer & sugar syrup	2	50
1.4.	Manufacturing of Barfi, Jaman, Qalaqand & Rasgulla & Rasmalai.	2	50
1.5.	Arabian sweets	2	10
1.6.	Pateesa jaat	2	60
1.7.	Halva jaat	2	60
1.8.	Quality assurance	2	30
1.9.	Packing & storage	2	10
2.	BAKERY		
2.1.	Introduction	1	-
2.2.	Ingredients (Milk, flours, fats, liquids, eggs, leavening agents, salt, flavorings & spices)	1	20
2.3.	Bread & Rusk	2	20
2.4.	Cakes & Icings (Fresh, Dry,)	2	20
2.5.	Biscuits	2	20
2.6.	Cross items (Patties, Samosa, Baqir Khawni, French hot)	2	20
2.7.	Pies and Pastries	2	20
2.8.	Pizza ,Burger & Shawrma	3	30
2.9.	Instant baking	1	20
2.10.	Packing & storage	2	10
2.11.	Quality control	2	20

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3	CONFECTIONERY		
	3.1. Introduction	2	-
	3.2. Types (Sugar & chocolate based)	3	10
	3.3. Ingredients (Sucrose, Glucose, Fructose, Non caloric sweeteners, Honey, cocoa, Fats, milk, Color, flavors, nuts, Food additives .Caramels)	3	10
	3.4. Candies, toffees & Lollypop	3	50
	3.5. Chocolate confectionery	3	54
	3.6. Gum based confectionery	2	20
	3.7. Packaging (Foil, films, laminates, pouches)	1	10
	3.8. Storage	1	10
Total		80	720

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LIST OF PRACTICALS

Sweets

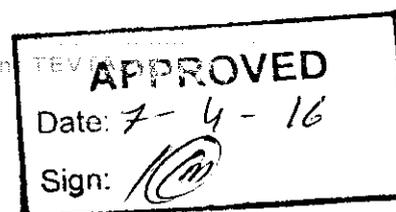
1. Preparation of Khoya
2. Preparation of Paneer
3. Preparation of Sugar Syrup
4. Preparation of Barfi
5. Preparation of Jaman
6. Preparation of Qalaqand
7. Preparation of Rasgulla
8. Preparation of Rasmalai.
9. Preparation of Arabian Sweets
10. Preparation of Pateesa Jaat
11. Preparation of Halva Jaat

Bakery

12. Preparation of Bread
13. Preparation of Rusk
14. Preparation of cakes
15. Preparation of Icings
16. Preparation of Biscuits
17. Preparation of Patties
18. Preparation of Samosa
19. Preparation of Baqar Khawni
20. Preparation of French Heart
21. Preparation of Pie
22. Preparation of Pastries
23. Preparation of Pizza
24. Preparation of Burger
25. Preparation of Shawerma

Confectionary

26. Preparation of Candies
27. Preparation of Lollypop
28. Preparation of Toffee
29. Preparation of Chocolate confectionary
30. Preparation of Gum based confectionary



SCHEME OF STUDIES**I.T. Fundamentals**

S.No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Introduction to Computers	2	6	8
2.	Typing - Microsoft Word	4	14	18
3.	Internet & Electronic Mail	2	12	14
Total		8	32	40

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DETAIL OF COURSE CONTENTS
I.T Fundamentals

S. No	Detail of Topics	Theory Hours	Practical Hours
1	<p>Introduction to Computers</p> <p>1.1 What is a computer- Definition, functions and general features?</p> <p>1.2 What is Hardware – 1.2.1 Computer parts and units 1.2.1.1 Input Unit - Keyboard, Mouse etc. 1.2.1.2 Central Processing Unit 1.2.1.3 Output Unit</p> <p>1.3 What is Software – 1.3.1 Electronic Parts of a Pc it is 1.3.1.1 Software and Its types 1.3.1.2 System Software, Application software and its functions</p> <p>1.4 Working with windows Operating System 1.4.1 How does windows desktops work? 1.4.2 Setting desktop, background and wall papers etc. 1.4.3 Viewing directories – List of files and folders different styles.</p> <p>1.5 What are the Icons, Shortcuts and other graphic, 1.5.1 How to see computer contents on different drives etc.</p>	2	6
2	<p>Typing and Word processing (MS Word)</p> <p>2.1 Proper way of typing correct and speedy - getting familiar with the keys</p> <p>2.2 Where to type in computer? How to save a file? How to get it back? Where to find your saved work?</p> <p>2.3 Formatting in MS Word Bold, Italic, page setup, setting shades and colors.</p>	4	14

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	2.4 Working with saved work, opening and moving files.		
	2.5 How to get it printed?		
3	Emailing and Internet Surfing	2	12
	3.1 How to go to Internet, what is required for an internet connection etc.		
	3.2 How to use email? How to search on web? Etc		
	3.3 How to make new email account, login and logout an email account etc.?		
	3.4 Downloading and uploading attachments etc.		
Total		8	32

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LIST OF PRACTICALS
I.T Fundamentals

S. No.	Name of Practical
1.	Turn On/Off and setting of power supply
2.	Accessing The Desktop
3.	Using of Icons and Shortcuts
4.	Setting / customizing the desktop
5.	Viewing the contents of computer – Directory
6.	Setting the view of a folder
7.	Copying, Deleting and Moving Files in a folder
8.	Working with different Applications
9.	Opening MS Word for typing
10.	First lesson of Typing A S D F
11.	Second Lesson of typing J K L ;
12.	Third Lesson U I O P
13.	Fourth Lesson R E W Q
14.	Fifth Lesson N M , .
15.	Sixth Lesson V C X Z
16.	Seventh Lesson All letter using R index Finger
17.	Eighth Lesson All letter using L index Finger
18.	Formatting in MS Word Bold, Italic etc.
19.	Page Setting/ Page Layout
20.	Using Internet
21.	Opening Email, making new account
22.	Sending Receiving Emails
23.	Downloading and uploading attachments etc.

Developed by Curriculum Section, Academics Department

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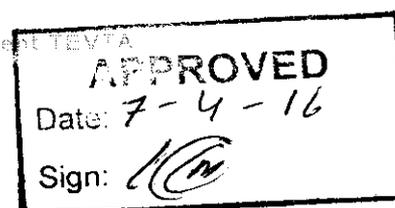
SCHEME OF STUDIES
Functional English

S.No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Use of past indefinite tense	2	6	8
2.	Use of 'was' 'were' ' questions and negatives	3	6	8
3.	Explaining a situations/ analysis	2	6	8
4.	Communication in writing	2	6	8
5.	Comprehension	1	6	7
6.	Application/ C.V.	1	6	7
7.	Dialogues	1	9	10
8.	Understand vocabulary	1	3	4
9.	Writing complaints/ answers to complaints	1	9	10
10.	Interviews	2	7	10
Total		16	64	80

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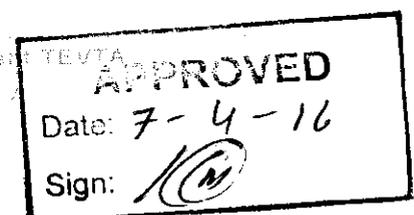
DETAIL OF COURSE CONTENTS
Functional English

S. No	Detail of Topics	Theory Hours	Practical Hours
1	Use of past indefinite tense 1.1 Describing past events	2	6
2	Use of 'was' 'were' ' questions and negatives	2	6
3	Explaining a situations/ analysis 3.1 Making a plan 3.2 Visiting factory area 3.3 Giving justifications	2	6
4	Communication in writing 4.1 Asking for list of stationery items 4.2 Submitting report of performance of team of technicians 4.3 Submitting joining report	2	6
5	Comprehension: practice sets	2	6
6	Job application/C.V.	1	6
7	Dialogues	1	9
8	Understand vocabulary	1	3
9	Writing complaints/ answers to complaints	1	9
10	Interviews	2	7
Total		16	64



LIST OF PRACTICALS
Functional English

S. No.	Practical
1.	Group discussion
2.	Interviews
3.	Role play



LIST OF LABS

Confectionery, Baking & Sweets

- Hot and Cold Kitchen

I.T Fundamentals

- Computer Lab

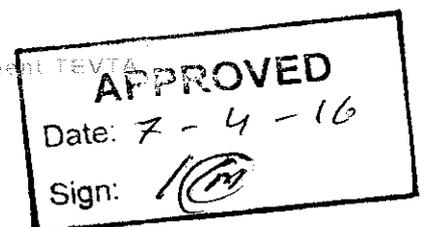
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LIST OF TOOLS / EQUIPMENT

(For a Class of 25 Students)

Name of Trade	Confectionery, Baking & Sweets
Duration of Course	6 – Months

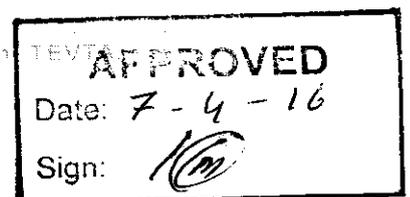
S. No.	Name of Articles	Quantity
1.	Thermometer (0-100 ⁰ C)	5 Nos.
2.	Thermometer (0-300 ⁰ C)	5 Nos.
3.	Micro-Wave Oven (Large Size)	1. No.
4.	Hand Refracto-Meter (Range 0—32 Brix)	1 No
5.	Hand Refracto-Meter (Range 32—64 Brix)	1 No
6.	Hand Refracto-Meter (Range 60—90 Brix)	1 No
7.	Lactometer	3 Nos
8.	Weighing Balance (Capacity 2 Kg.)	1 No.
9.	Electric Top Loading Balance	1 No.
10.	pH Meter Digital	1 No.
11.	Pans , Mugs , Buckets etc.(S.S)	3.SETS
12.	Abrasive Peeler	1. No.
13.	Wooden Ladles	2. SETS
14.	Digital Electronic Analytical Balance 4 Decimal	1. No.
15.	Mixing Machine (Capacity=15 Liter)	1. No.
16.	Kettle (Stainless Steel) Capacity 10 litre	1 No.
17.	Kettle (Stainless Steel) Capacity 5 litre	1 No.
18.	Plastic Tub (Capacity 50 litre)	1 No.
19.	Juicer Blender	1 No.
20.	Bread Pans	5 No's
21.	Cake Pans	5 No's
22.	Icing Gun	2. No's
23.	Biscuit Gun	2. No's
24.	Biscuit cutting dies	20 No's
25.	Cutting board for biscuits	1 No.
26.	Rolling pin	4 No's
27.	Baking trays	10 No's



28.	Domestic refrigerator (Dawlence/PEL)	1 No.
29.	Sticks	6
30.	Round cutter	2
31.	Polish rods	2
32.	Drum	2
33.	Baking oven	2
34.	Rollers	2
35.	Mixing machine	2
36.	Cutter	2
37.	Sieves	2
38.	Pista cutter	1
39.	Almond cutter	1
40.	Barfi mixer	1
41.	Chiller	1
42.	Bread cutter	1
43.	Rusk cutter	1
44.	Sandwich trays	2
45.	Rusk trays	2
46.	Bun trays	2
47.	Karahi	2
48.	Patti pan	2
49.	Patti cutter	2
50.	Stands	1
51.	Chicken pie pan	1
52.	Pizza pan	1
53.	Steel rods	2
54.	Grinder	2
55.	Knives = Peeling, Coring, Pitting, Cutting (Stainless Steel ,Wooden Grip)	3 Sets

COMPUTER LAB

S. No.	Tools / Equipment	Quantity
1.	Desktop computer (Specifications as per notification issued by MIS Section, TEVTA)	26 (1 for each student & 1 for the teacher)
2.	Printer (Laser)	01
3.	Scanner	01
4.	Internet Connection (At least 1 MB speed)	01
5.	UPS 10 KVA	01
6.	Air Conditioner 1 ½ Ton	02
7.	Multimedia Projector	01



CONSUMABLE MATERIALS**Confectionery, Baking & Sweets**

S. No.	Item	Quantity
1	Milk	40 L
2	Milk Powder	5 Kg
3	Condensed Milk	10 L
4	Khoya	40 Kg
5	Whey Powder	5Kg
6	Sugar, Icing Sugar, Glucose, Maple Sugar, Corn Syrup	100 Kg
7	Sorbitol	1 L
8	Aspartame	500 Grams
9	Gum Base	2 Kg
10	Salt	1 Kg
11	Fine Flour, White Flour, Suji	100Kg
12	Corn Flour	5 Kg
13	Baking Powder, Eka Powder	1 Kg
14	Gluten	1 Kg
15	Colour (Yellow, Red, Orange, Caramel)	100 Grams Each
16	Flavor (Lemon, Keyora, Vanilla, Strawberry, Chocolate, Winter Green, Pepper Mint, Orange, Lychee, Angori)	500 mL
17	Dry Fruits (Almond, Coconut, Walnut, Peanut, Groundnut, Pista, Kishmish, Chalghoza, Dates)	5 Kg each
18	Acids (Citric Acid, Malic Acid, Tartaric Acid, Lactic Acid)	500 Grams Each
19	Vegetables (Potato, Tomato, Green, Onion, Garlic, ginger Pepper, Cucumber, Cabbage, Carrots, Radish)	5Kg Each
20	Oil, Ghee, Baking Shortening	20 Litre
21	Eggs	5 Dozen
22	Eggs Powder	1 Kg
23	Cream, Whipping Cream	10 Litre
24	Cheese	5 Kg
25	Silver Papers	1 Pack
26	Chocolate Bunties, Coca Powder	1 Kg
27	Cake Premix	1 Kg
28	Lemon Juice	1 Litre
29	Preserves	1 Kg
30	Yeast	12 Sachet
31	Culture	12 Sachet
32	Dry Spices (Black Pepper, White Pepper, Red Pepper, Zeera, Long, Daar Cheni, Cardamom)	200 Grams each
33	Pulses(Channa, Mong)	2 Kg each
34	Zafran	200 Grams
35	Chicken	10 Kg
36	Bread Crumps	1 Kg
37	Chilli Sauce, Garlic Sauce, Soya Sauce	1 Kg each

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38	Tomato Ketchup	5 Kg
39	Vinegar	5 Liter
40	Black Olives	1 Kg
41	Lolly Pop Paper	1 Pack
42	Lolly Pop Sticks	1 Pack
43	Honey	1 Litre
44	Honey Wax	1 Kg
45	Pecans	1 Unit
46	Xylitol	1 Litre
47	Vegetable Glycerin	200 MI
48	Gum Arabic	1 Kg
49	Soya Lecithin	1 Kg
50	Butter	10 Kg
51	Detergents	5Kg
52	Sanitizers	5 Litre
53	Sponge and Wire Sponge	6 Dozen
54	Dusters (Cotton)	12 Dozen
55	Gloves (Disposable)	6 Packs (100 per Pack)

Functional English

S. No.	Item	Quantity
1.	Stationary	As per requirement
2.	Board Markers	As per requirement

I.T Fundamentals

S. No.	Item	Quantity
1.	Printing Paper	As per requirement
2.	Printer Toner	As per requirement

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MINIMUM QUALIFICATION OF INSTRUCTOR

- B.Sc. (Hons) Food Technology / Equivalent.

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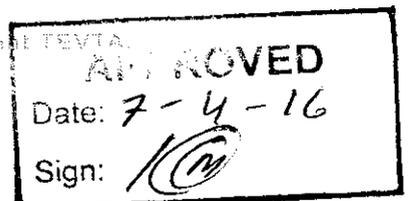
- DAE in Food Processing & Preservation Technology / Food Technology with 2 Year experience in the relevant field.

Functional English

- M.A (English)

I.T Fundamentals

- DAE CIT/ BCS from HEC recognized university



REFERENCE BOOKS

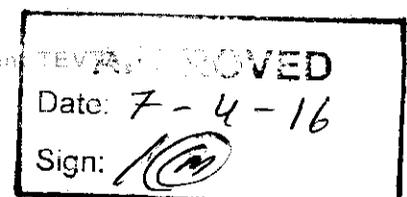
1. Sugar Confectionery manufacturing 2nd Edit. EB Jackson, 1995. Blackie Academic & Professional Wester, Glassgow.
2. Science of sugar confectionery, WP Edwards, 2000. Royal Society of Chemistry, Cambridge.
3. Sugar confectionery and chocolate manufacture, R. Lees and EB Jackson, 1999.
4. Biscuits, Cracker and Cookie recipes for food industry, Duncan Manley 2001, CRC Press England.
5. Practical Baking, WJ Sultan, AVI Westport.
6. Food Preservation Manual By Javed Aziz & Saleem-ur-Rehman
7. Food Processing Operations By Nercel Dekker(New York)

Functional English

1. High School English Grammar By Wren & Martin
2. Oxford English Grammar

I.T Fundamentals

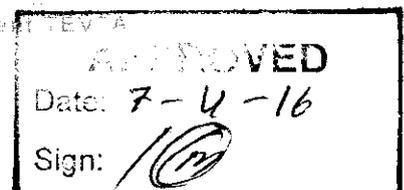
3. Introduction to Computer by Peter Norton
4. 2007 Microsoft® Office System Step by Step by Joyce Cox, Steve Lambert and Curtis Frye
5. Internet and E-mail with Windows 7 by Studio Visual Steps



EMPLOYABILITY OF PASS OUTS

The pass outs of this course may find job / employment opportunities in the following areas / sectors: -

1. Bakers & confectioners
2. Commercial sweets processors
3. Hotels, Restaurants, Resorts and clubs.
4. Fast foods shop
5. Recreational places
6. Super malls.



LIST OF TRADE RELATED JARGON

- Confectionary
- Ingredients
- Baking
- Fermentation
- Process
- Syrup
- Preserve
- Preservative

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Sign:	

Curriculum Revision Committee

1. **Muhammad Mukhtar** **Convener**
Chief Instructor
HOD, Food Department
GCT, Samanabad
Faisalabad
2. **Muhammad Umar Farooq** **Member**
Lecturer (Hotel & Management)
GTTI Gulberg, Lahore
3. **Muhammad Ajmal,** **Member**
Instructor (HOD) Food Technology,
GCT Sahiwal

