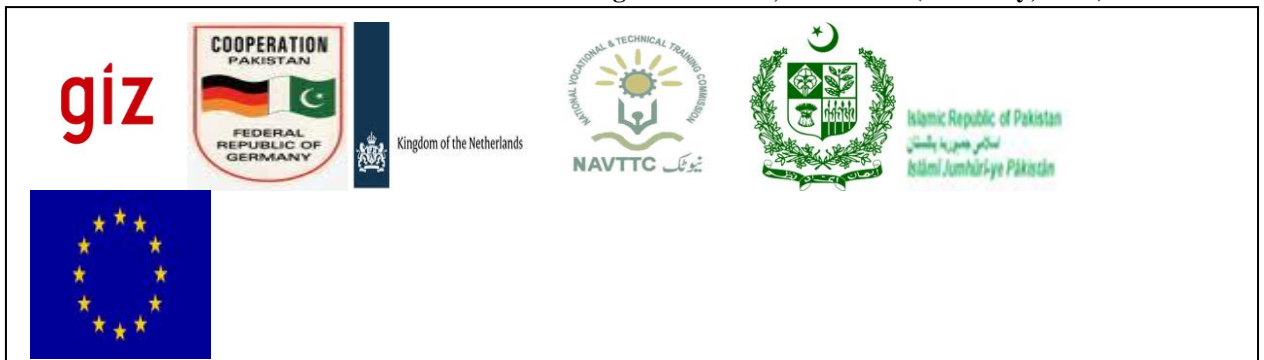


CURRICULUM FOR MEAT HANDLING & PROCESSING

6-MONTHS
(Certificate Course)

National Vocational & Technical Training Commission, Islamabad (February, 2012)



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TRAINING OBJECTIVES

The major objectives of this course are to:

- Produce skilled workers for meat industries, mega super stores, etc. having knowledge of hygiene, nutrition, quality assurance and processing techniques.
- Enable the trainees to contribute nationally and internationally for earning valuable foreign exchange.

CURRICULUM SALIENT POINTS

Name of Course:	Meat handling & processing
Entry level:	Middle preferably matric / Illiterate with minimum 03 years butchery experience in a recognized organization
Duration of course:	6-months
Total Training Hours:	800 hours
Training Hours Per week:	40 hours
	7 hours per day
	5 hours Friday
Training Methodology:	Practical 70% Theory 30%
Medium of Instruction:	English/Urdu

SKILL PROFICIENCY DETAILS

After completion of this course, the trainee must be able to,

1. Receive animals
2. Perform Halal hygienic slaughtering
3. Store the carcasses / poultry
4. Carry out cutting of whole carcasses / poultry
5. Do Packaging
6. Store end products
7. Process meat / poultry products
8. Practice by-product processing
9. Carry out waste management

KNOWLEDGE PROFICIENCY DETAILS

After completion of this course, the trainee must learn about:

1. Identification of breeds
2. The health of animals / poultry
3. The composition of meat / poultry
4. Processing methodologies
5. The nutritional aspects of meat / poultry
6. The Hygiene / safety guidelines
7. Quality assurance/ quality control
8. The Microbiological aspects
9. Packaging
10. The preservation techniques of meats / poultry
11. Waste management

SCHEME OF STUDIES
Meat Handling & processing
(6-Months)

Sr. No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Introduction of live stock	20	60	80
2.	Slaughtering /Handling of Carcass/ Poultry	50	120	170
3.	Quality assurance and nutrition	30	40	70
4.	Cutting	30	100	130
5.	Packaging	30	80	110
6.	Meat processing & preservation	50	120	170
7.	Functional English	20	20	40
8.	Work Ethics	10	20	30
Total		240	560	800

DETAIL OF COURSE CONTENTS
Meat Handling & Processing
(6-Months)

Sr. No.	Detail of Topics	Theory Hours	Practical Hours
1.	Introduction of live stock 1.1 Definition / History 1.2 Identification of breeds 1.3 Composition of beef, mutton, poultry 1.4 Sourcing	2 5 10 3	0 40 0 20
2.	Slaughtering/ Handling of Carcass / Poultry 2.1 Health of animal 2.2 Slaughtering techniques 2.3 Halal / Islamic slaughtering 2.4 Cold chain storage. 2.5 Pre/Postmortem changes 2.6 Offal management 2.7 Dressing of carcass 2.8 Transportation.	5 10 5 5 10 5 5 5	10 60 10 10 10 10 10
3.	Quality assurance and nutrition 3.1 Introduction 3.2 Quality assurance systems 3.3 Hygiene / Health & Safety 3.4 Microbiology of meat/poultry. 3.5 Nutritional aspects of meat and poultry.	5 5 5 10 5	0 0 20 20 0
4.	Cutting 4.1 Introduction of tools / equipment / machinery 4.2 Safety Precautions 4.3 Cutting Types / Techniques 4.4 Meat grading	10 5 10 5	20 10 60 10
5.	Packaging & storage 5.1 Introduction 5.2 Types of Packaging material 5.3 Food grade packaging of meat / poultry 5.4 Storage techniques and display	5 10 5 10	0 20 20 40
6.	Meat processing & preservation 6.1 Salting, brining, smoking, drying, freezing, canning of meats/ poultry. 6.2 Sausages 6.3 Meat /poultry By-products	25 5 10	80 20 10

	6.4 Meat / poultry waste management	10	10
7.	Functional English	20	20
8.	Work Ethics	10	20
Total		240	560

LIST OF TOOLS AND EQUIPMENT

FOR CLASS OF 25

Meat Handling & Processing (6-Months)

Name of Trade	Meat Technology
Duration of Course	(6-Months)

Sr. No.	Tools / Equipment / Machinery (Food Grade Stainless Steel)	Quantity
1	Choppers	25
2	Knives Bonner+ Stake	25+25
3	Steel sharpener (file)	10
4	Mince machine 5 inch	2
5	Cutler machine	01
6	Chopping board (wooden)	20
7	Chopping board (Teflon food grade)	05
8	Safety gloves (steel made)	25
9	Mask Disposable	1000
10	Net Caps Disposable	1000
11	Uniform Hats	35
12	Steel toe shoes	26
13	Slicer machine	01
14	Laser temperature gauge /Probe	05
15	Hooks	10
16	Hanging bars	01
17	Trays	25
18	Trolleys	05
19	Plastic Pallets	01
20	Dust bin	10
21	Weighting Scale (capacity up to 15 kg)	01
22	Weighting Scale (capacity minimum 200 kg and above)	01
23	Wrapping machine	01
24	Shelves	01
25	Freezer	02
26	Display cabinet	01
27	Shrink wrap role	05
28	Cleaver	02
29	Spray nozzle	05
30	Cooking range	01

EMPLOYABILITY OF PASS-OUTS

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

- Municipal slaughter houses.
- Mega super stores like macro, metro, hyper star etc
- Meat and poultry industries like K&N's, Seasons, Dawn etc.
- Fast food chains.
- Five star hotels.

MINIMUM QUALIFICATION OF INSTRUCTOR

Theory	B.Sc (Hons) Food Technology
Practical	Butcher (Having minimum. 5 years working experience in reputed chain) or company

REFERENCE BOOKS

- 1- Elementary food Science by
John T. R. Nickerson And Lovis t. Ronsivalli

Reprinted by
National Book Foundation
- 2- Handbook of Meat Processing
By Fidel Toldrá
Blackwel Publishing
- 3- Meat Processing & Meat Products Hand Book
By Eiri
- 4- Advanced technologies for meat processing
By Leo M. L. Nollet, Fidel Toldra
- 5- Meat science and applications
By Y. H. Hui, Yiu H. Hui, Wai-Kit Nip
- 6- Meat Science: An Introductory Text
By Paul D. Warriss

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