

PLANT PROTECTION (351)

The institution having the following requisite infrastructure, may apply for accreditation:

Class Room : Class room for 30 students (Minimum area 250 sq. ft.) should have proper ventilation, well-illuminated black board/white board and availability of adequate furniture and sealing fans.

Workshop : The workshop size for 30 students should be at least 25ft. x 20 ft. with adequate lighting and exhaust & sealing Fans. The workshop should have the following Tool/ Equipments/Apparatus or material for Practical Training:

List of tools and equipment's

List of tools and equipment's

Item	Quantity	Item	Quantity
Autoclave/pressure cooker	2	Bavistin (fungicide)	As per needed
Refrigerator	1	Dithane z-78/indofil/Nuvan	
Gas stove	1	Formalin	100ml
Chafcutter	2	Hydrochloric acid(0.1 N)	5lt
Sprayer	1	1% Malthion	5lt
Ultraviolet lamp	5	Dichlorovos	As per need
Thermometer	5	Agar Agar	250gm
Auto clavable polyethylene bags		Glucose	500gms
Inoculation needle	15	Media : Potato dextrose	
Paddy straw/wheat straw	As needed	Agar or oat meal agar - to be prepared	
Cotton waste/hulled		Glassware	
Universal pH indicator	10strips	Conical flasks/milk bottles (500/100)	10
Raw Material (Consumables)		Glass slides	1 pkt.
Calcium Carbonate	250gm	Beaker (1litre)	5
Potassium permanganate	500gms	Petridish - 90mm	5
Sodium hypo chlorite (2%)	1lt.	Test tube	20
Mother culture of mushroom	20 bottles	Glass funnel	20
Sorghum grams	As needed	Maize cobs	

Physical Facilities : The institution should have the Facilities for Drinking water, Bathrooms & Toilets (Minimum - 05)

Library : Library should have a minimum 20 books/articles/magazines etc. related subject.

Faculty & Supporting Staff:

Faculty & Supporting Staff	Educational/Professional Qualification	No.
Coordinator	Graduate	01
Instructor	M.Sc. - Ag. in Entomology/B.Sc. - Ag. from recognized University with 2 years experience	02
Lab incharge/lab Assist.	10 th class pass preferably locally trained person	01
Receptionist cum clerk	Relevant to job	01
Assistant	Relevant to job	

Batch size - Maximum 30 students in one batch.

Note : Institution can run maximum 2 batches of this course

Certificate Course in Oyster Mushroom Production (353)
Certificate Course in Mushroom Production (618)

The institution having the following requisite infrastructure, may apply for accreditation:

Class Room : Class room for 30 students (Minimum area 225 sq. ft.) should have proper ventilation, well-illuminated black board/white board and availability of adequate furniture and sealing fans.

Lab cum Workshop : The workshop size for 30 students should be at least 25ft. x 20 ft. with adequate lighting and exhaust & sealing Fans. The workshop should have the following Tool/ Equipments/Apparatus or material for Practical Training:

List of tools and equipment's

Item	Quantity	Item	Quantity
Autoclave/pressure cooker	2	Bavistin (fungicide)	As per needed
Refrigerator	1	Dithane z-78/indofil/Nuvan	
Gas stove	1	Formalin	100ml
Chafcutter	2	Hydrochloric acid(0.1 N)	5lt
Sprayer	1	1% Malthion	5lt
Ultraviolet lamp	5	Dichlorovos	As per need
Thermometer	5	Agar Agar	250gm
Auto clavable polypylene bags		Glucose	500gms
Inoculation needle	15	Media : Potato dextrose	
Paddy straw/wheat straw	As needed	Agar or oat meal agar - to be prepared	
Cotton waste/hulled		Glassware	
Universal pH indicator	10strips	Conical flasks/milk bottles (500/100)	10
Raw Material (Consumables)		Glass slides	1 pkt.
Calcium Carbonate	250gm	Beaker (1litre)	5
Potassium permanganate	500gms	Petridish - 90mm	5
Sodium hypo chlorite (2%)	1lt.	Test tube	20
Mother culture of mushroom	20 bottles	Glass funnel	20
Sorghum grams	As needed	Maize cobs	

Physical Facilities : The institution should have the Facilities for Drinking water, Bathrooms (minimum - 02), & Toilets(minimum - 05)

Library : Library should have a minimum 20 books/articles/magazines etc. related subject.

Faculty & Supporting Staff:

Faculty & Supporting Staff	Educational/Professional Qualification	No.
Coordinator	Graduate	01
Instructor	B. Sc. Ag. (Preferably in Agronomy/plant pathology) or B.sc. Botany from recognized University with Diploma/Certificate in Mushroom Production with 2 years experience	02
Lab incharge /Lab assist.	10 th class pass preferably locally trained person	
Receptionist cum clerk	Relevant to job	01
Assistant	Relevant to job	

Batch size – Maximum 30 students in one batch.

Note : An institution can run Maximum 2 batches for this course.

ELECTROPLATING (355)

The institution having the following requisite infrastructure, may apply for accreditation:

Class Room : Class room for 20 students (Minimum area 225 sq. ft.) should have proper ventilation, well-illuminated black board/white board and availability of adequate furniture and sealing fans.

Lab cum Workshop : The workshop size for 20 students should be at least 25ft. x 20 ft. with adequate lighting and exhaust & sealing Fans. The workshop should have the following Tool/ Equipments/Apparatus or material for Practical Training:

List of tools and equipment's

Sl. No.	Equipment /tools	Quant ity	Sl. No.	Equipment /tools	Qua ntity
1.	Canvas apron	5	13.	Gold plating vat enameled iron (small size)	1
2.	Respirator	5			
3.	Goggles	10	14.	Grinder with high revolution emery wheel.	1
4.	Gum boots rubber	3 pairs	15.	Motor polisher (4 bearing type)	1
Shop out fit			16.	Barrel plating outfit for nickel	1
1.	Vice hand 50mmjaw	2	17.	Burnishing set 150mm to 200mm	1
2.	File flat 200mm 2 nd cut & File flat 200mm smooth	2 each	18.	Polishing barrel outfit for nickel Polishing barrel 45 x 90cm	1 each
3.	Cutting Pliers insulated 200mm	2	19.	Dippling basket 200mm dia x 25mm	1
4.	Bradawl	2	20.	Plating basket 45cm x 130cm	1
5.	Electrical - knife double bladed	2	21.	Open ended plating barrel & Plating basket 45cm x 30cm x 130cm	1 each
6.	Leather chamois piece 50mm x 60cm	4	22.	Plastic siphon 12mm dia	1
7.	Brush hand scratch	8	23.	Nickel comparator test set	1
8.	Bob felt 200mm & Bob stitched 150mm dia	16 each	24.	Jet test apparatus	1
			25.	Buffing machine in spindle with meter bearing motored	1
9.	Mop polishing & Mop dresser	16 each	26.	Plastic siphon 12mm dia	1
			27.	Adjustable resistance board with voltmeter volt & ammeter. Suitable for each vat for voltage current control	9 nos.
10.	Dresser emery	1			
11.	Tong flat jaw 100mm length	4			
12.	Cleaning tank 100x60x45cm	1			

28	Basin 300mm enamel	6	36	Electroplating rectifier three phase set to operate from 380/440 volts. 50 cycles, 3 phase a.c. supply 16 volts. d.e. with an output of 500 amperes. dc. voltage adjustable from 3.5 to 16 with 63 step on load, complete with the required meter panels and change over switch .
29.	Glue pot 1 kg	1		
30.	File 2 nd cut half round 150mm	4		
31	Exhaust fans minimum	3		
32.	Vat for bright nickel plating lead lined 125cm x 100x60mm	1		
33.	Dull vat for nickel plating lead lined 125x100x60cm	1	37.	Electric heater(silica lined)2 k.w. capacity.
34	Bright vat for chromium plating with outside water jacket 125x100x60cm		38.	Electric heater (lead lined) 2 k.w. capacity
35.	Hard chrome plating vat with Antimonial lead lining with reinforced glass lining 125x100x60cm thermostat controlled attached with outside water jacket.		39.	PH meter

Physical Facilities : The institution should have the Facilities for Drinking water, Bathrooms & Toilets.

Library : Library should have a minimum 20 books/articles/magazines etc. related subject.

Faculty & Supporting Staff:

Faculty & Supporting Staff	Educational/Professional Qualification	No.
Coordinator	Graduate	01
Instructor	I.T.I/Community Polytechnic/NIOS or equivalent Certificate in Chemical Engineering with 2 years experience	01
Receptionist cum clerk	Relevant to job	01
Assistant	Relevant to job	

Batch size - Maximum 20 students in one batch.

Note : An institution can run Maximum 2 batches for this course.

HOUSE KEEPING (356)

Teachers:

1. The should be at 1 least teacher for a group of 10 students.
2. The teacher should have an B. Sc. in Home Science from a reputed Home Science College or a one year certificate diploma in House keeping.

The Lab:

- The lab should have a black board or a white board.
- The lab should have the following:
 - 2 worktables preferably of 4 ft x 4 ft.
 - One sink with water connection
 - Storage shelves /racks etc
- The Institute should possess a first aid kit and have a fire extinguisher on the premises

For a batch size of 10 students following equipment's are required.

List of tools and equipment's

Tools	Nos.	Tools	Nos.
Vacuum cleaner	1	Tailoring machine	1
Brushes (Toothbrush/Carpet brush Soft rush/ Feather brush Toilet brush)	2each	Iron	1
Brooms Soft/Yard/Hard boom	2each	Ironing board/table	1
Basins	2	Scissors	4
Dust pan	4	Washing machine Optional	1
Bowls	6	Flower vase	10
Buckets	4	Stem holder	10
Ladder	1	Sponge	10
		Florist's wire	10

CATERING MANAGEMENT (357)

Classroom :

1. The classroom should be adequate in size & it should be well lit, with comfortable chairs for the students.
2. The classroom should have a black board or a white board.
3. The Institute should possess a first aid kit and have a fire extinguisher on the premises.

The Lab :

1. Lab size should be adequate, with proper lighting and ventilation.
2. The lab should have the following:
 - 2 worktables with aluminum top
 - one sink with water connection
 - one almirah /cupboard/shelves for storage
 - one covered bin for garbage

Teachers:

1. There should be at least one teacher for a group of 10 students.
2. The teacher should be B.Sc. Home Science with 2 years exp. diploma from Food Crafts/catering management or NIOS students 2 yr. experience.
3. The Instructor for conducting the practical should have at least 1year experience in handling food in some lab.

List of tools and equipment's

Tools	Nos.	Tools	Nos.
LPG 4 burners	1	Service spoons	12
Hot food cabinet	1	Ash trays	2
Chaffing dishes	2	Menu stands	2
Trays	2	Flower vases	2
Dinner set	1	Table clothes 46" sq	2
Tea sets	1	Serviettes 10" x18"	12
Coffee sets	1	Tray clothes (According to size of tray)	2
Butter dishes	1	Glassware	
Bottle/can opener	2	Water goblets	6
Cork screws openers	2	Ice cream cups	6
Pastry tongs	2	Juice glasses	6
Ice cream scoops	2	Pudding bowls (service)	6

FOOD PROCESSING (358)

1. The classroom should have a black board or a white board
2. The Institute should possess a first aid kit and have fire extinguisher on the premises.

The Lab:

- Lab size should be adequate in size , with adequate lighting and ventilation for a batch of 15

The lab should have the following

- 2 worktables with aluminum top
- one sink with water connection
- one almirah /cupboard/shelves for storage
- one covered bin for garbage

Teachers:

1. There should be at least one teacher for a group of students.
2. The teacher should be B.Sc. Home Science with diploma in Preservation processing from catering institute or
3. The Instructor for conducting the practical should have at least 1year experience in handling food in relation to processing and preservation.

List of tools and equipment's

Tools	Nos.	Tools	Nos.
Refrigerator	1	Weighing scales (1 kg)/5 kg.	1
Food processor	1	Pestle & mortar	1
Mixer grinder	1	Colander	2
Oven - toaster -griller	1	Refracto meter	1
Microwave oven(optional)	1	Sealing machine	1
Gas stove	4	Corking machine	1
Food adulteration kit	1	Pulper (manual)	1
Pressure cooker	5 lit./3 lit./- 1, 5 lit.	Sealing unit (small size)	1

Basic Equipment in a Food Lab

Sl. No	Tools	Nos.	Sl. No.	Tools	Nos.
1.	Pressure cooker of 3 lit	2	20.	Ladles	6
2.	Mixer-grinder or grinding stone	1	21.	Frying spoon (30cm length)	2
3.	Kitchen weighing scale	2	22.	Flat spoon (30cm length)	10
4.	Sieves	set	23.	Round spoon	2
5.	Strainers (different size and gradation)	6	24.	Mixing bowls (SS)	
6.	Measuring spoon set	1	25.	Degchi	6
7.	Measuring cup set	1	26.	Frying pan	2
8.	Tongs (Stainless Steel)	2	27.	Karahi	2
9.	Rolling pin	5	28.	Thalis	6
10.	Chapati rolling board	5	29.	Trays	6
11.	Iron tawas (Griddle plates)	5	30.	Katori	12
12.	Aluminium colanders (small)	2	31.	Rice platters (stainless steel)	5
13.	Food covers (set)	2	32.	Stock pot with lid	2
14.	Lime squeezer	2	33.	Long forks	6
15.	Egg beater (wire whisk)	2	34.	Tea spoon/table spoon	12
16.	Rubber spatula	5	35.	Wooden spoons	6
17.	Knives - Coring/Pitting - Peeling/Cutting	2 each	36.	Heavy bottom pan	4
18.	Grater	2	37.	Buckets with tap and lid	2
19.	Slicer	2	38.	Kitchen weighing scale	1

PLAYCENTRE MANAGEMENT (359)

1. The institute offering this course should have a play center/pre school crèche for children of the age group 1-5 years on the premises. Alternatively, it should have an arrangement with an institute having such facilities so that the students of this course can be placed there for the practical work.
2. There should be at least one teacher for a group of 30 students.
3. The teacher should have a B.Sc. Home science from a reputed Home Science College or a 2 year certificate from a reputed Nursery Teachers Training Institute or NIOS course.

Classroom:

1. The classroom should be of adequate in size, for seating of students, it should be well lit, with comfortable chairs for the students. The classroom should have a black board or a white board.
2. The institute should possess a first aid kit and have a fire extinguisher on the premises.

Equipment Required:

If the Institute is attached to a formal play centre or an organized play group, or a pre-school, then there is no need for the following equipment at the Institute itself.

If the Institute has a Crèche or play centre or a pre-school on the premises itself, then an inspection need be made in terms of he following equipment.

List of tools and equipment's

Outdoor play Equipment	Musical instruments - 10
Swings - 2	Drums, Jingle bells, Dholak & Tablas, Rattlers, Xylophone, rhythm sticks, Chimes
Tricycles - 5	Picture books & story books
Jungle gym cum slide- 1	Animal toys
Rubber balls (small & big) - 10	Display boards 60" x 40" -
Rocking toys - 5	Flannel board 60" x 40"
Sand pit	Ratter black boards - 10
Indoor Play Equipment	Wooden Plastic beads
Building blocks - 5 sets	Plastic bead medium size
Picture puzzles - 5 sets	Charts of animals, birds, flowers, etc.
Doll corner equipment - 1 sets	Globe 15" diameter

POULTRY FARMING (361)

The institution having the following requisite infrastructure, may apply for accreditation:

Class Room : Class room for 30 students (Minimum area 250 sq. ft.) should have proper ventilation, well-illuminated black board/white board and availability of adequate furniture and sealing fans.

Lab cum Workshop : The workshop size for 30 students should be at least 25ft. x 20 ft. with adequate lighting and exhaust & sealing Fans. The workshop should have the following Tool/ Equipments/ Apparatus or material for Practical Training:

List of tools and equipment's

Items	Quantity	Items	Quantity
Chicks	25	Water	5
Broiler	25	Heaters	5
Layers	25	Labour	2
Different types of litters	5	Medical aids	one box
Feeds	as per req.	Thermometer	2
Feeder	5	Specimens of bird diseases/charts	4
Spread	1	Hand glove	4/5
Mask	10		

Physical Facilities : The institution should have the Facilities for Drinking water, Bathrooms & Toilets.

Library : Library should have a minimum 20 books/articles/magazines etc. related subject.

Faculty & Supporting Staff:

Faculty & Supporting Staff	Educational/Professional Qualification	No.
Coordinator	Graduate	01
Instructor	B.Sc. _ Ag. from recognized university (Preferably Trained personal in the field of poultry)	02
Lab incharge/lab Assist.	10 th class pass preferably locally trained person	01
Receptionist cum clerk	Relevant to job	01
Assistant	Relevant to job	

Batch size - Maximum 30 students in one batch.

Note : An institution can run Maximum 2 batches for this course.

- Institute should have modern Poultry farm of 100 birds.

SOIL AND FERTILIZER MANAGEMENT (362)

The institution having the following requisite infrastructure, may apply for accreditation:

Class Room : Class room for 30 students (Minimum area 250 sq. ft.) should have proper ventilation, well-illuminated black board/white board and availability of adequate furniture and sealing fans.

Lab cum Workshop : The workshop size for 30 students should be at least 25ft. x 20 ft. with adequate lighting and exhaust & sealing Fans. The workshop should have the following Tool/ Equipments/Apparatus or material for Practical Training:

List of tools and equipment

Different type of soils	Each type of	Sample of Bio-fertilizer	Microchips, Agotobactor, Rhizobium culture
Sample of soils (All nine types)	Soil in glass/plastic jag	Soil map for colour, texture and physical appearance of the soil (Munched chart)	2
Different type of fertilizers DAP, Urea, Super phosphate, Gypsums, marinate of potash	100gm each	Litmus paper and universal indicator for testing soil Ph.	2
Farms yard manure	1 kg	Glassware for soil analysis beaker Flask -2 Glass rod -2 Test tubes 04 Measuring cylinder - 2 Filter paper - 12	Per sample
Chemicals for (the estimation of total soil Nitrogen/Phosphms/ potash / organic carbon)	H ₂ SO ₄ (Sulphuric Acid), HCL (Hydro chloric acid) etc. (500 ml. Bottles each)	Implements for taking soil samples Spade - 1 Kassi - 1 Augur - 1 Hand Hoe - 1	
Facilities for estimation of soil nutrients IH, organic matter etc.		Plastic bags for collection of soil smples.	

Physical Facilities : The institution should have the Facilities for Drinking water, Bathrooms & Toilets.

Library : Library should have a minimum 20 books/articles/magazines etc. related subject.

Faculty & Supporting Staff:

Faculty & Supporting Staff	Educational/Professional Qualification	No.
Coordinator	Graduate	01
Instructor	M.Sc. _ Ag. in Soil Science/Chemistry or B.Sc. (Ag.) from recognized university with 2 years experience	02
Lab incharge/lab Assist.	10 th class pass preferably locally trained person	01
Receptionist cum clerk	Relevant to job	01
Assistant	Relevant to job	

Batch size - Maximum 30 students in one batch.

Note : An institution can run Maximum 2 batches for this course.

- Institute should possess minimum of 0.5 acre of land.

PRESERVATION OF FRUITS AND VEGETABLES (363)

Classroom :

1. The classroom should have a black board or a white board.
2. The Institute should possess a first aid kit and have a fire extinguisher on the premises.

The Lab :

1. Lab size should be at least 30 ft x 30 ft, with adequate lighting and an exhaust fan.
2. The Lab should have the following:
 - 2 worktables .with aluminum top
 - 1 table and chair for the Instructor.
 - Two sink with water connection
 - One almirah/cupboard for storage.
 - One covered bin for garbage

Teachers:

- There should be at least one teacher for a group of 15 students.

The teacher should be B.Sc. Home Science who has done certificate course in Preservation or a Person who is trained from Food Craft Institute or any Polytechnic.

MACHINERY & EQUIPMENT FOR PREPARATION OF PRESERVED PRODUCTS

Tools	Nos.	Tools	Nos.
Baby Pulper / Food Processor	1	Stainless Steel Pineapple Cutting Knife	2
Rosing machine (Hand operated)	1	Stainless Steel teaspoons	12
Screw type juicer (Hand operated) (Cap 10 kg. juice/)	1	Stainless Steel eye remover	2
Weighing machine 5 kg. capacity	1	Pocket refractometer 0-45, 40-85	1 set
Weighing Balance 2 kg capacity	1	gel meter	2
Stainless Steel /aluminum ladles	4	Measuring Cylinder 100 ml to 500 ml capacity	3
Stainless Steel Patilas with lids diameter 15"/10"/20"/22"/24"	2 each	Measuring spoons(plastic) Graters	2 sets 3
SS Mugs (Cap. 1 litre/1/2 lit.)	1	Chopping board plastic/wooden	2
Aluminum mug	3	Stainless Steel Sieves	2
Wooden laddles	2	Funnels of different size	4

Aluminum Trays to hold 5 - 8 kg.	4	Muslin cloth	
Bucket plastic/stain less steel	2	Colours, essenes and chemicals.	
Gas Burner (LPG)	1	Almirah / Rack/Shelves / Gloves	
Crown Corking machine (desirable)	One (optional)	Stainless Steel Knives 4"/3" long with wooden handle	3