

## Jute Production Technology (251)

&

## Water Management for Crop Production (352)

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 ceiling fans.

**Lab cum Workshop :** The workshop size for 30 students should be at least 25ft. x 20 ft. with adequate lighting and exhaust & ceiling 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
Spade	10	Sieve set	1
Pickaxe/kudali.	10	Ridge Former	2
Khurpa	10	Water bath	1
Sampling tube	10	Cultivator	1
Soil and water kits	2	Insect Cabine Box	6
Soil Colour chart	1	Moisture meter	1
Improved Sackle/ Hansiya/ Koyta (Debagoo)	10	Winnowing stool	1
Rain gauge	1	Dryer Oven	1
Dry and wet bulb thermometer	1	Hand Rotary Duster	1
Crow bar	2	Ph meter	
Seeds Fertilizer drills Manual - Raw, Drawn (3 row)		3tinedhand cultivator (Grubber)	5
Hygrometer	1	Seed generator	1
Pan evaporate meter	1	Incubator	1
Wooden plough	3	Food sprayer/Knap sack	
Physical Balance and weight box	2	Insect killing Bottle	5
Mould Board Plough-1	1	Insect net	5
Laboratory grinder	1	Storage bins	5
Harrows	2	Wheel barro (small)	5
Aluminum Moisture Box	30	Hot Plate	1

**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. From recognized University	02
Lab incharge /Lab assist.	10 <sup>th</sup> class pass preferably locally trained person	
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.

**CARPENTRY (252)**  
**FURNITURE & CABINET MAKING (354)**

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 ceiling fans.

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

**List of tools and equipment's**

Equipment /Tool	Quant ity	Equipment /Tool	Quant ity
Carpenter square 200mm	5	File half round 2 <sup>nd</sup> cut 250mm	4each
Square bevel 50mm	5	File Rabp	4
Carpenter marking gauge	5	File slum taper	3
Carpenter morso gauge	5	Hand drill	3
Hand saw 450mm & Tenon saw 300mm	5 each	Brad arts	5
Jack plane 335mm x 50mm cutter & Smoothing plane 200mm x 50mm cutter	5 each	Gimlet set	3
		Brace	2
Chiesel firmer (bevel edge) 6mm 10mm, 15mm, 20mm and 25mm width(2 each)	10	Bit set for brace	2
Chisel mortise 6mm, 10mm, 15mm(each)	10	Carpenter pincer	5
Screw drive 300mm cabinet maker	5	Parallel clamp & C. clamp (eacj)	5
Mallet medium size	5	Adjustable bar clamp	5
Oil stone	1	Rasp cut file half round 300mm	10
<b>Tools, equipment &amp; general out fit</b>		Carving indifferent types	4 set
Spring caliper inside 150mm & Spring caliper outside 150mm	4 each	Lathe wood turning 150mm Height of centers 150mm, 1.75meter bed with a set of turning tools.	1
Trammel	4 part		
Sprit level	2	Bench girinder 200mm. Wheel double ended pedestal	1
Ripsaw 600mm	4	Portable electrician drilling machine 12mm	1
Plough plane with set of 8 cutter upto 12mm width	2	Work Bench 7'x4' with 2 carpenters vice	2
Spoke shaves 50mm cutter	2		

**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	ITI/Community Polytechnic/NIOS or equivalent certificate in Carpentry, Furniture & Cabinet Making or Diploma in Mechanical/Civil Engineering	02
Lab incharge /Lab assist.	10 <sup>th</sup> class pass preferably locally trained person	
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.

## SOLAR ENERGY TECHNICIAN (253)

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.

**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

Equipment /tools	Quantity	Equipment /tools	Quantity
Solar intensity meter	1	Water meter	1
Heat exchanger	1	Solar dryer	1
Collector loop heater	1	Glass cover	4
Solar intensity simulator	1	Clay	As required
Storage device (thermal)	1	Conical solar water still distilled water	1
24 cells Solar photovoltaic cells (system) 1 panel 2'x2'	1 set	G.I. pipe (size as per requirement)	
		Water pan	1
Transparent plastic sheet	10	Velo meter	1
Solar cooker (domestic + community)	1+1	Basin type solar distillation unit	1
Liquid flat plate collector	1	Tubular stationary 24 volt. 260amp battery	1
Storage tank water	1		
Pump with motor	1	Solar PV panel of 340 watt	1
Flow indicator	1	Invertors with 18 watt tube light	12
Energy meter	1	Lead acid storage battery	1
Motor and pump starter	1	Solar water pumping system	1
stop watch	2	Electrical cable	25 meter
Solar controller	1	Delivery head pipe	2 ½ "-1 length as required
Solenoid valve	2	Suction head pipe	2 ½ "-1 length as required
Control panel (optional)	1	Pyranometer to measure solar intensity	1

**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./Diploma in Agriculture Engineering or Diploma in Mechanical/Civil/Electrical Engineering and having under gone elective course in non-conventional energy. Or B.Sc./Intermediate with Science subject with two years of experience in installation & maintenance of Solar Energy plants	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.

## BIO GAS ENERGY TECHNICIAN (254)

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.

**Workshop :** The institution should have installed Biogas plants Kvic drum type/Janta type/Deenbandhu type and 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

Equipment/tools	Quantity	List of non-consumables	
Digester(Fixed/Mobile Model)	1	Sink	1
PH meter	1	C.I. trap (nahani)+PVC trap	2
Glass jar	1	Check valve ½"	1
Glass bottle	1	Ferrule ½"-1"	4
Manometer	1	G.I. bend	1
Gas valve	1	Grating	1
Gas pipe fitting	1	G.I. union	1
Gas burner	2	½" dia G.I. Elbow (1.25 cm)	1
Gas regulator	2	½" dia G.I. pipes (1.25 cm)	3
Hammers of different weights	2	½" G.I. Socket (1.25 cm)	4
Improved sickle/hansiya/ koyta (debgoo)	15	P.V.C. connector	5
Dryer oven	1	C.I. pipe 4" x 3" dia	10
Digestion and distillation unit	1	C.I. tee	4
Distillation water still	1	C.I. bend (diff. Size & types)	20
Spirit level	2	P.V.C pipe 4" q	2
Files of different types & sizes	10	P.V.C. bend 4" q	3
Chisel	5	P.V.C. elbow 4" q	3
Plumb bob	2	P.V.C. trap 4" q	1
Pipe die with bits	2	P.V.C. tee 4" q	1
Bench-vice	2	Gully trap	4
Caulking tools	2	Maser trap	1
<b>List of consumable material</b>		½" G.I. Tee (1.25 cm)	5
Lead	(as required)	½" G.I. Nipple	5
Chemical binder	- do -	Iron clamp 4" dia	6
Waterproof tape	- do -	Bottle trap	2
Waterproofing compound	- do -	Waste water pipe 1 ¼" 3 lengths(3.25cm)	3
Wash basin	1	Mason Kit	5

**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./Diploma in Agriculture Engineering or Diploma in Mechanical/Civil/Electrical Engineering. Or B.Sc./Intermediate with Science subject with two years of experience in installation & maintenance of Bio-gas plant.	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.

## LAUNDRY SERVICES (255)

### Classroom :

1. The classroom should be at least 15ft x 15ft, 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 at least 30 ft x 30 ft, with adequate lighting and an exhaust fan.
2. The Lab should have the following:
  - 2 worktables of 4 ft x 4ft.
  - 1 table and chair for the Instructor.
  - Two sink with water connection
  - One almirah/cupboard 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 have a M.Sc. in clothing and Textiles from a reputed Home Science College or a three year diploma in Hotel Management with 2 years experience/B.Sc. Home Science.

### List of tools and equipment's

Tools	Nos.	Tools	Nos.
Washing machine (desirable)	1	Spray bottles	10
Bucket	5	Tray/basin	5
Tubs	5	Spotting Brush	10
Plastic mugs	15	Magnifying glass	10
Suction washer	1	Drying rack	2
Beating stick	5	Fold up in door dryer	2
Scrubber	5	Racks	2
Iron & Ironing board	5	Stitching kit	10
Sleeve ironing boards	10	Small cushions	10
Chemicals for stain removal		Scissors - Big & Small	2

## BAKERY AND CONFECTIONERY (256)

### 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 ft, with adequate lighting and an exhaust fan.
2. The lab should have the following
  - 2 worktables of 4 ft x 4ft.
  - One sink with water connection
  - One almirah /cupboard for storage.
  - One covered bin for garbage.

### Teachers :

1. B.Sc. Home science or
2. The teacher should be have a Diploma in Bakery and Confectionery with 2 years experience or certificate in Bakery and confectionery.
3. The Instructor for conducting the practical should also have experience in dealing with bakery and confectionery products or certificate in Bakery and confectionery.

### List of tools and equipment's

Tools	Nos.	Tools	Nos.
Electric bread oven (medium size)	1	Flat trays	1
Refrigerator	1	Biscuit cutters (various shapes & sizes)	1 set
Gas stove (single burner) with gas	1	Cooling racks (stainless steel) (size 2'x 1'x 4') (Optional)	4
Mould for cakes of with different sizes	6	Pastry brushes ½" 1" & 2"	3 each
Wooden cake dummies	6	Sugar thermometer	1
Turn table for icing purpose (plastic) (Optional)	5	Flan tins	2
Pastry tins	2	Bread knife	1
Bread tins (400gms)(size 20x10x7cms)	2	Palette knife	4
Muffin trays	2	Cream horns	6

### WELDING TECHNOLOGY (257)

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.

**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

Equipment / tools	Quantity	Equipment / tools	Quantity
Gloves pair leather asbestos	5 pairs	Hammer sledge double faced 3 kg	1
Apron/asbestos leachier	5	Pipe wrench 25cm and 35cm	1 each
Screen welding helmet type	5	Steel tpe 182cm flexible	2
Screen welding hand	5	Welding torches with set of nozzles (Low/High)	1 each
Goggles pair welder	5		
Hammer scaling 0.25 kg. with handle	5	Earth clamps	2
Chisel cold flat 19mm	5	Pipe dotter (cap. 50mm dia)	1set
Centre punch 9mm x 17mm	2	Oxy-acetylene torch with cutting nozzle	1set
Dividers 20cm	2	Heavy duty blow pipe with cutting and gouging nozzles	1 set
Caliper outside	2	Electrode holder 400 amps	5
rule 60cm two fold (inches)	2	Welding rubber hose, Oxygen and acetylene 8mm length	as required
Wire brush 15cum x3.7cum	10	Rubber hose clips	as required
Spark lighter	5	Spindle key (for opening cylinder valve)	2
Chipping screen hand	5	Pressure regulator oxygen double stage	2
Safety boots for welders	5	Pressure regulator acetylene double regulators	2
Square 15cm	2	Glass white 108mm x 82mm	20
Tongs holding 30cm	5	Glasses coloured 108mm 82mm x 3mm din 11 a 13a	10
<b>Shop outfit</b>		Outfit spanner for regulator	2
Steel or nickel chrome rule 30cm	2	Tip cleaner	5 sets
Hammer ball per 1 kg. With handle	2	Rubber hose pipe black and red 5mm (length as required)	
Chisel cold cross 9mm	5	Leather sleeves	2 pairs
Screw driver 25cm blade and 20 cm blade	2 each	Transformer (continuous welding current) 400amps	2 set

Vice bench 10cm	4	Welding generator DC rotary set 200-300 amps	1 set
Number punch 6mm and letter punch 6mm	2 set	Welding cables (400amps)	Length as required
Hacksaw frame adjustable 30cm	5	Lugs for cables	- do -
Hammering block 5cmthick 60sq.	1	Oxygen cutting machine (line & circle)	1
Magnifying glass 15cm	2	Gas welding table 822 cm x 92cm + 60cm fire bricks on stand with positioner	5
Weld measuring fillet and butt	2	Arc welding table all metal with positioner 122cm x 92cm x 60cm	5
File half round bastard 30cm	5	Trolley for cylinder (HP unit)	2
File flat 35cm rough	5	Bench shear hand capacity up to 5mm	1
Spanner 12mm and 15mm double ended	5	DC grinder 30mm wheel motorized pedestal type	2
Spanner double ended 6mm to 15mm 1.5 mm	1set	Portable drilling machine (cap. 6mm)	1
C clamps 10cm, 15cm, 20cm, 30cm	1 each	Fire Extinguisher	

**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	ITI Certificate in Welding Technology Trade or Diploma in Mechanical/Civil/Electrical Engineering.	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.