Sir/Madam

"ITIs affiliation norms 2017" regarding civil infrastructure norms duly approved from competent authority. Therefore, it is desired to seek feedback / grievance from public/stake holders, if any in prescribed feedback format on or before 8th April 2017 through email to Deputy Director General (Training) email: deepankar.mallick60@nic.in & copy to Director (Training) email: rajkumar.pathak@gov.in

ITIs AFFILIATION NORMS 2017

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ITIs AFFILIATION NORMS 2017

I) PROPOSED CIVIL NORMS FOR ESTABLISHMENT OF ITIs

A) Sizes of the class room and workshop shall remain the same as mentioned in existing norms placed at Annexure 2E & Annexure 2F

B) In addition to B.C.C and existing guidelines as per annexure 2E and 2F, there are other essential requirements that have to be met and are as follows

Sl. No.	Particulars	Description of norms
1.0	Building Completion Certificate	Desirous Institutes are required to submit a Building Completion Certificate (BCC) from the Competent Authority clearly stating that the Building(s) is fully constructed and ready in all respects for the intended use as per the local building Bye-Laws related to Institutional Buildings. If local buildings Bye-Laws are not available then the building should conform to the bye-laws prescribed for Institutional buildings in National Building Code (N.B.C) of India (Refer to Part 3, Part 4, Part 8 and Part 9).
2.0	Land/Plot Size based on Capacity	a) Rural Places as defined by Competent Authority – Minimum area of the plot shall be 0.8 Hectares/ 02 Acres up to 200 trainees per shift, there after additional area of 40 Sq. M for each trainee. b) Other than Rural place (Competent Authority to certify that the place is not located in a rural area.) - Minimum area of the plot shall be 1.25 Acres up to 200 trainees per shift , there after additional area of 25 Sq. M for each trainee C) In urban areas where higher Floor Area Ratio (FAR)/ Floor Space Index (FSI) limits are permitted, the requirement of plot area may vary proportionately

Sl. No.	Particulars	Description of norms
2.1	Ownership of the Plot & building.	a) Owned Plot / Building or b) Plot / Building which is registered live lease, minimum lease period of 10 years shall be allowed.
2.2	Integrated building	All the blocks of the institute should be constructed with in a single contiguous plot as per local building byelaws.
2.3	Plot Entrance Gate	Institute shall be constructed plot entrance gate minimum 06 m as per the local building byelaws.
2.4	Building entrance Gate	Minimum 2.4 m width is required ,As per the local building byelaws.
3.0	**Institutional Area**	
3.1	Class room	The minimum size of classroom shall be 25 sq.mt. with minimum width of 3 m.
3.2	Work shop area.	As per existing norms mentioned in Annexure 2F
3.3	Roof of workshop	a) Flat/pitched RCC roof as prescribed for construction of the workshop or b) Profiled Industrial roof sheets with structural supports as per IS/ASME standards should be allowed. *Sheds with tin sheets/Asbestos sheets should not be allowed*
3.4	Drawing Hall	Drawing Hall is required for all engineering tardes with minimum area of 50 Sq.M except Draughts man (civil)/ Draughts man (mechanical) trades.This area is upto 160 trainees and thereafter additional proportionate area for each additional trainee
3.5	Backup Power Supply	Institute should have backup supply with a capacity 50% of power supply for all the affiliated trades .Backup power supply generator should have proper installation with separate arrangement of dedicated control panel for safe switch over. Note: Training equipment /machinery will not be considered against infrastructure, equipment as per norms.
3.6	Raw material storage Room and oil & Gas storage room	Raw material storage Room/Oil & Gas storage room shall be minimum area 90 sq.m. Where ever gas/oil storage is required, room shall be separate with raw material storage room otherwise single room of area 90 Sq.m is sufficient.
3.7	IT Lab	*The minimum size of the IT lab shall be 25 sq.mt for 10 computers. An additional 2.5 sq.mt. Shall be made available for each additional computer.*

		The minimum width of the lab shall be 3 mt.Floor shall be at least Tiled	
4.0	**Administrative Area**		
4.1	Principal Room	Minimum area 20 Sq.mt.	
4.2	Reception cum waiting lobby	Minimum area 40 Sq.mt.	NOTE : The area proposed upto 160 trainees and thereafter additional proportionate area for each additional trainee
4.3	Staff Room	Minimum area 20 Sq.mt.	
4.4	Administrative Hall/Section.	Minimum area 50 Sq. mt.	
4.5	Placement/Counselling room	Minimum area 20 Sq. mt.	
5.0	**Amenities Area**		
5.1	Multipurpose Hall/Court Yard	Minimum area 110 Sq. mt.	
5.2	Library & reading Room	Minimum area required for library and reading room should be 40 Sq. M for up to 160 trainees and then 10Sq.M for every additional 40 trainees. .	
5.3	Canteen (including kitchen & pantry)	Minimum area 110 Sq. mt	
5.4	First Aid Room	Minimum 15 Sq.m	
5.5	Play ground	As per Local Building Bye-Laws.	
5.6	Drinking water facility	Institute shall be provided Treated Drinking water facility at all floor/workshops as per the local building bye-laws	
6.0	**Boards and Signage's**		
6.1	Signage Board on plot entrance	**Details needed:** ITI's name and full address and ITI logo & Skill India Logo.	
6.2	Signage Board on Institute building	**Details needed:** ITI's name, and ITI logo &Skill India logo	
6.3	Signage Boards showing directions	Directions should be displayed showing the different sections of the building like work shop, admin building and hostel etc. Signage boadrs for 3 phase power supply ,danger boards,prohibited areas etc also needs to display.	
6.4	Trade details board	Trade details board shall display the list of trades, seating capacity and number of trainees enrolledand name & specifications of the machinary/equipment.	
6.5	Staff details board	Staff details board shall display with name, qualification and contact numbers at least for principal and public relation officer.	
6.6	**Desirable Requirements:**		
		i. Rainwater harvesting	Note : Solar

		(For all the Institutes irrespective of the trainee strength) ii. Solar Energy/Power Systems iii. Announcement system in classrooms, strategic locations for general announcements and announcements in case of emergency. iv. Enterprise Resource Planning (ERP) Software for Student-Institution-Parent interaction v. ATM vi. CCTV Security System vii. LCD (or similar) projectors in classrooms	Energy / Renewable energy source availabiity , sewage treatment plant and Rain water conservation and augmentation is manditory for all the ITI's having the strength more than 500 trainees in each shift.
7.0	**Important basic requirements**		
7.1	Open spaces around the building	Not less than 06 m.	National Building Code of India part 3 development control rules and general building: 8 open spaces (within plot):8.3 other occupancies; (b) page no.25
7.2	Open spaces separate for each building	Building more than 07 m. height shall not be less than 1.5 m	National Building Code of India part 3 development control rules and general building: 8 open spaces (within plot):8.1.2 page no.23
7.3	Ceiling height of building	Minimum 3.6 m for all region (the maximum height of building shall not exceed 1.5 times the width of road abutting plus the front open space)	National Building Code of India part 3 development control rules and general building: 12 requirements of part of building: 12.2: 12.2.1.1 : (a)

7.4	Car parking- A) individual B) common	Min 3m x 6m Min. 3.75 m x 5.m	National Building Code of India part 3 development control rules and general building requirements: 10 off street parking: refer 10.1 to 10.9 page no 28 & 29 for detail
	Scooter/two wheeler &	not less than 1.25 sq.m each	
	Bicycle	not less than 1.00 sq.m each	
NOTE	Area for each equivalent car space inclusive of circulation area is 23 sq.m for open parking,28sq.m for ground floor covered parking and 32 sq.m for basement		
7.5	**STAIR CASE REQUIRMENT**		
	width of stair	2.0 m	National Building Code of India part 3 development control rules and general building: 12 requirement of part of building:12.18: 12.18.1 to 12.18.2 page no.34
	width of tread	0.3 m	
	height of riser	0.15 m riser shall be limited up to 12 per flight	
	height of head room	2.2 m	
7.6	**TOILET /WC FACILITY**		
	Institutes shall be provided separate toilets for boys, girls and differently abled persons separately as per local building bye-laws/NBC of India		
7.6 a	**STAFF**		
	WATER CLOSET	Minimum 01 nos. (max 25 nos male) Minimum 01 nos.(max 15 nos female) For differenttly abled persons shall be provide as per local bukding bye laws .	
	URINALS	Minimm 01 nos. (for max 20 persons) Ablution tap installed in each water closet. Seperate urinals shall be provide for boys,girls and differently abled persons as per local building bye-laws .	
	WASHBASINS	Minimum 01 nos for 25 person	
	A) Treated drinking wate FOUNTAIN	Minimum 01 nos for 100 person at each floor of the building and work shop.	
7.6 b	**TRAINEE**		
	A) WATER CLOSET	01 per 40 boys 01 per 25 girls For differenttly abled persons shall be provided as per local building bye laws/NBC of India.	
	B) URINALS	01 per 20 boys and 01 per 15 Girls Seperate urinals shall be provided for boys,girls and differently abled persons as per local building bye-	

		laws
	C) WASHBASINS	01 per 60 boys 01 per 40 girls For differenttly abled persons shall be provided as per local building bye laws/NBC of India
	D) DRINKING WATER FOUNTAIN	01 per 50 boys & girls For differenttly abled persons shall be provided as per local building bye laws/NBC of India
7.7	Disaster Management Plan	All the Institutes shall have disaster management plan as prescribed in the general guide lines S.NO 08 & 09.

8.0 General Guidelines

Essential and desirable Requirements / General Guidelines in case of various Events:

8.1. FIRE

Essential requirements:

- All the buildings, after completion and before occupation, shall be inspected for fire and life safety measures by the Local Fire Service Authorities and a certificate to that effect shall be obtained. In the absence of such a certificate, following requirements shall be met.
- Fire buckets filled with sand shall be hanged in the protected stands near workshop, laboratory, DG room, transformer and sub-station.
- Fire point should be established in front of each building with 2 fire water buckets, 2 sand buckets and 4 fire extinguishers one of each type.
- Minimum 2 numbers of extinguisher of any type should be installed at every prominent location
- Every exit, exit access or exit discharge shall be continuously maintained free of all obstructions or impediments to full use in case of fire or other emergency.
- Retro reflective Signage shall be provided for escape routes at suitable height.
- Evacuation drill shall be conducted for each building quarterly.
- To avoid stampede and to manage any emergency properly, the Institution should have a Standing Fire Order – Document containing established procedures required to handle fire & emergency situations in which duties & responsibilities of various Authorities & Agencies are included (Sample copy enclosed).

Desirable requirements:

- The CCTV camera shall be provided to cover all the important areas of the campus including fire fighting system like extinguishers, hose reels, risers, automatic detection and alarm system, sprinkler system, manual call points etc.
- Assembly point shall be provided in a safe place with no fencing around it.

8.2. ELECTRICAL HAZARD

Essential requirements:

- Proper earthling and bonding of electrical wiring shall be ensured.
- All major equipment shall be earthed separately
- Earth leakage circuit breaker (ELCB) shall be provided as required.
- No overhead High tension electric line shall pass across the premises.
- Sub stations or transformers if any shall be segregated. Carbon di-oxide, dry chemical powder (DCP) and Mechanical foam fire extinguishers, san buckets shall be provided.

Desirable requirements:

- All overhead electric lines shall be at a height not less than 5.4 m from the ground.
- Electrical resistant mats should be placed in front of every electric panel.
- Only trained and licensed electricians should be allowed to do work related to electric supply.
- Vertical clearance of any bare electric line passing near a building shall be minimum 2.43 m from the highest point in the building and the horizontal clearance shall be minimum 1.2 m from the closest part.
- A clear space of not less than 1 m in width shall be provided in front of the switchboard.

- If there are any attachments or bare connections at the back of the switchboard, the space (if any) behind the switchboard shall be either less than 20 cm or more than 75 cm in width, measured from the farthest outstanding part of any attachment or conductor.

- Lightning arrester shall be provided for all the buildings

8.3. UNSAFE DRINKING WATER / FOOD:

Essential requirements:

- Clean all reservoirs on periodic basis
- Test quality of water every three months.

Desirable requirements

- Test quality of samples of food prepared on campus in an independent laboratory preferably once in six months.

8.4 WORKSHOP ACCIDENT

Essential requirements:

- Personal protective equipment shall be available for each one entering the workshop.
- Instructions for workshop safety must be displayed inside and outside the workshop.
- First aid kit shall be maintained.
- Safety precaution for operation for each machine should be affixed with it.
- Standard Operating Procedure (S.O.P.) for all the equipment and system must be prepared and properly displayed near the respective machine.
- All the electrically operated machinery should be properly earthed and bonded.

- Emergency contact numbers shall be displayed for contacting in case of any emergency which should include Safety Officer, fire control room, medical assistance, Security assistance, Head of the concerned department, maintenance services.
- Instructions regarding the procedure to be followed in case of an emergency occurring in the building outside the workshop during the running of work shop shall be displayed inside and outside the workshop in the form of Do's and Don'ts.

Desirable requirements:

- While installing or keeping machines and tool, racks aisles and gangways should be provided.
- There should be Schedule for standard test for machines and tools.
- Work shop floor should be made by non-skid and non-static floor tiles.
- Place for disposal of materials should be properly marked.
- Housekeeping shall be done as per proper Schedule.
- Various fuels used in work shop shall be stored in minimum quantity according to requirement.
- Proper ventilation facilities shall be provided to prevent dust accumulation. 6.

8.5 EMERGENCY SITUATION - PHYSICALLY CHALLENGED

Essential requirements:

- Ramp shall be provided for the disabled for easy access to and evacuation from the building.
- Sufficient wheel chairs and stretchers shall be available for use in emergency Desirable requirements:
- Information regarding the number of physically challenged people in the campus should be available with the Safety Officer.
- The time and the number of physically challenged persons among the visitors shall be recorded at security gate.

8.6 STRUCTURAL FAILURE OF BUILDING

General Guidelines:

- Emergency evacuation procedure with evacuation plan shall be kept ready.
- Provisions shall be made to cut off water, electricity, and LPG connections safely from outside the building.
- Structural audit of buildings shall be done periodically.

STAMPEDE

Guidelines to be followed

- Proper signage for traffic control route shall be displayed.
- Public Address system shall be implemented to communicate and to direct.
- Power back up for extra illumination of exit routes shall be available.

- It is necessary to do planning and practicing mannerly and orderly evacuation and maintaining records.
- Student volunteers need to be trained for proper evacuation
- Ensure that no more than 4 persons / sq.m. Shall assemble in all assembly areas.
- Temporary barriers shall be provided to use in emergency to restrict and to control traffic.

8.7 EARTH QUAKE

General Guidelines:

- Construction of building shall be as per relevant Indian Standards and Codes of practice. Already constructed structures if already not designed to satisfy earthquake resistance, shall be strengthened as per relevant Indian Standards and Codes of practice.
- Proper evacuation plan based on the Standing Fire Order shall be maintained and it should cover all the possible emergencies.
- Evacuation drill / Exit drill shall be conducted quarterly and such records shall be maintained (Different groups, members, date of conduct, observations).
- Training should be given to all members of the evacuation teams to perform their duties and records shall be maintained.
- The most suitable and safest place shall be selected as safe assembly point for each building.
- Large or heavy items if any shall be placed closest to the ground.
- Hang large items such as framed pictures, large mirrors etc. away from sitting place, bed and protected escape routes.
- Brace overhead light fittings properly.
- An inventory for the details of heavy duty equipment and necessary tools with the details and contact numbers of owner and operator shall be maintained for ready reference.
- Avoid glass panelling for buildings. However if provided, shall be protected with metal screens.

8.8 CYCLONE

General Guidelines:

- Keep in contact with the concerned authorities before the cyclone season each time for warning and precautionary measures
- List of emergency phone numbers shall be displayed.
- Training should be given to all members of the response teams to perform their duties, and records shall be maintained
- Provision shall be made to secure strongly all doors, windows and other openings, if any, in closed position.
- Emergency kits containing portable battery radios, torch lights, spare batteries, water container, dry fruits, match boxes, fuel lamps, portable stove, cooking utensil, etc. shall be maintained in cyclone prone areas.
- Low frequency communication devices shall be in place.
- Avoid glass panelling for buildings. However if provided, shall be protected with metal screens.

- Construction of buildings shall be strong enough to resist collapse during wind.
- Long and continuous structures shall be avoided so as to reduce the effect of wind.
- Deep rooted plants which can resist wind can be planted around but outside the boundary wall to reduce the wind velocity.
- No tall plants shall be there in the compound, especially near any building.

8.9 FLOOD:

General Guidelines:

- Provision for the storage of drinking water at the rate of 4.5 litres / 1 Day / person for the total occupants for a minimum of 3 days during impending flood shall be made.
- Provision for storage of non-perishable easy to prepare food for 3 days' supply during impending flood shall be made.
- Flash light for signal (Red cross store) shall be arranged.
- Portable battery Radios (if possible NOAA - National Oceanic and Atmospheric Administration type) shall be arranged.
- Flood rescue equipment like lifebuoy, life jacket, and portable boats with oar and out board engine, rope shall be stored and ready for use.
- Occupational Health centre shall be maintained.
- Para medical Team shall be available and trained.
- Provision should be made on top floors of the buildings for shelter in case of flood.
- Insect repellents and sunscreen shall be stored.

LAND SLIDE

General Guidelines:

- Construct Retaining walls wherever necessary to prevent erosion.
- Train permanent staff to identify the symptoms of landslide.
- Avoid buildings in steep slope or along natural erosion valleys.

9.0 STANDING FIRE ORDER

(To be displayed at all the floors at suitable visible places with all emergency contact numbers)

9.1 Responsible authorities

- The person who detects the Fire
- Safety Officer
- Maintenance Section

9.2 Detects the fire

- Immediately inform the Safety officer and Head of the section / division

9.3 Responsibilities of safety officer:

On receipt of information:

- He / She shall immediately proceed to the scene of incident and assess the situation.

- If considered necessary, He / She shall raise fire alarm for His / Her zone, and notify the incident to Fire department and the listed emergency services, officer shall have confirmed this action latter.
- If necessary, he/she shall direct the Maintenance section to salvage the records and materials from the area.
- If considered necessary, He / She shall evacuate His / Her zone and/or neighbouring zones.
- At the earliest opportunity He / She shall inform the incident to the Departmental head.

Duties of Maintenance section Members:

- On receipt of call for emergency in their own zone, all the members of Maintenance section;
- Shall immediately proceed to the place of incident and report to their Duty Officer.
- Shall strictly follow the instructions of Safety Officer and work under him / her as per his / her directions.
- Shall, as per the instructions from Duty Officer/Fire Officer, switch off electrical supply to the affected area.
- Shall see that electric supply is restored only on instructions from the Duty Officer/Fire Officer.
- Close the air condition system at the affected area.
- Shall ensure that booster pump located in the building is Switched On.
- Shall ensure that all the Hydrants in and around the Building are charged with sufficient pressure.

Duties of other staff from the affected zone/zones:

- On hearing the Emergency Alarm, all the other members of staff:-
- Are requested no to be panic, but to remain calm and follow instructions of the Safety Officer in an orderly and disciplined manner.
- If directed to evacuate, shall ensure that all the electric lights at their work place are switched off and that all the windows and doors of their area are properly closed before leaving the place.
- During evacuation, shall proceed in an orderly manner to the ground floor by the nearest available staircase/emergency exit.
- Shall not use the lifts.
- Shall see that, persons assigned with specific duties in an emergency are not disturbed or obstruct their work.

Annexure – 2F

WORKSHOP NORMS

Norms for Engineering and Non-Engineering Trades

Engineering Trades

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom (Sq Mt)	Power Supply load (KW) 3-Phase, Commercial
1	Architectural Assistant	2	20	80+35 for Computer room	25	5
2	Attendant Operator (Chemical Plant)	4	16	104	25	13
3	Civil Engineer Assistant	4	20	120	25	6
4	Computer Hardware & Network Maintenance	2	20	70	25	3.45
5	Domestic Painter	2	20	80	25	2.5
7	Draughtsman (Mechanical)	4	20	64	25	3.7
8	Electrician	4	16	98	25	5.2 (for 2 units in one shift)
9	Electronic Mechanic	4	20	56	25	3.04
10	Electroplater	4	16	60	25	16
11	Fitter	4	16	88	25	3.51
12	Foundry man Technician	2	16	128	25	11
13	General Carpenter	2	20	120	25	8

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom (Sq Mt)	Power Supply load (KW) 3-Phase, Commercial
14	Gold Smith	2	16	48	25	5
15	Industrial Painter	2	20	80	25	2.5
16	Information Technology	4	20	70	25	3.45
17	Information Technology Communication	4	20	70	25	3.45
18	Instrument Mechanic	4	20	80	25	8.07
19	Instrument Mechanic (Chemical Plant)	4	16	104	25	8
20	Interior Decoration and Designing	2	20	40+80+36 (6x6 for Computer lab)	25	10
21	Laboratory Assistant (Chemical Plant)	4	16	96	25	6
22	Lift & Escalator Mechanic	4	16	98.6	25	6
23	Machinist	4	12	130	25	20
24	Machinist (Grinder)	4	12	102	25	23.4
25	Maintenance Mechanic (Chemical Plant)	4	16	96	25	13
26	Marine Engine Fitter	2	16	84	25	3
27	Marine Fitter	4	16	256	25	30
28	Mason (Building Constructor)	2	20	80	25	3
29	Mech. Motor Cycle	2	16	100 (Including Parking Area)	25	3

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom (Sq Mt)	Power Supply load (KW) 3-Phase, Commercial
30	Mechanic Mechatronics (Fitting and Measurement)	4	16	192	25	8
31	Mechanic (Motor Vehicle)	2	16	210 (Including Parking Area)	25	4.8
32	Mechanic (Refrigeration and Air-Conditioner)	4	20	80	25	6.82
33	Mechanic (Tractor)	2	16	210	25	4.8
34	Mechanic Agricultural Machinery	4	16	56	25	5
35	Mechanic Air-conditioning Plant	4			25	
36	Mechanic Auto Body Painting	2	16	210 (Including Parking Area)	25	4.8
37	Mechanic Auto Body Repair	2	16	210 (Including Parking Area)	25	4.8
38	Mechanic Auto Electrical and Electronics	2	16	100 (Including Parking Area)	25	3
39	Mechanic Consumer Electronics Appliances	4	20	56	25	3.04
40	Mechanic Diesel Engine	2	16	150 (Including Parking Area, Workshop 130, Parking 20)	25	4.8
41	Mechanic Lens/Prism Grinding	2	12	100	25	7.5
42	Mechanic Machine Tools Maintenance	4	16	192	25	17
43	Mechanic Medical Electronics	4	20	120 sq.mts. (inclusive of 10 sq.mts Dark room	25	5

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom (Sq Mt)	Power Supply load (KW) 3-Phase, Commercial
				area)		
44	Mechanic Mining Machinery	4	20	292	25	20
45	Operator Advanced Machine Tools	4	12	144	25	25
46	Painter General	4	16	56	25	5
47	Physiotherapy Technician	2	16	100	25	3
48	Plastic Processing Operator	2	16	Adequate space	25	13.6
49	Plumber	2	20	80	25	2
50	Pump Operator-cum-Mechanic	2	16	84	25	11
51	Radiology Technician (Radio Diagnosis & Radiotherapy)	4	16	75.04	25	4
52	Refractory Technician	4	16	130 (L:B::2:1)	25	13.6
53	Rubber Technician	2	20	60	25	5
54	Sheet Metal Worker	2	16	80	25	11
55	Spinning Technician	4	16	525	25	19
56	Stone Mining Machine Operator	2	20	100sq.m covered area + 250sq. m open area	25	10
57	Stone Processing Machines Operator	2	20	100	25	10
58	Surveyor	2	20	64	25	3

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom (Sq Mt)	Power Supply load (KW) 3-Phase, Commercial
59	Technician Power Electronic System	4	20	70	25	5
60	Textile Mechatronics	4	20	240	25	9
61	Textile Wet Processing Technician	4	16	104	25	8
62	Tool & Die Maker (Dies & Moulds)	4	16	130	25	29.6
63	Tool & Die Maker (Press Tools, Jigs & Fixtures)	4	16	130	25	29.6
64	Turner	4	12	110	25	18.5
65	Vessel Navigator	4	16	240	25	20
66	Weaving Technician	4	20	525	25	9.4
67	Welder	2	16	80	25	16
68	Welder (Fabrication & Fitting)	2	16	80	25	16
69	Welder (GMAW & GTAW)	2	16	80	25	16
70	Welder (Pipe)	2	16	80	25	16
71	Welder (Structural)	2	16	80	25	16
72	Welder (Welding & Inspection)	2	16	80	25	16
73	Wireman	4	16	88 (11x8)	25	5

Non Engineering Trades

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom(Sq Mt)	Power Supply load (KW)

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom(Sq Mt)	Power Supply load (KW)
74	Agro Processing	2	20	96	25	6
75	Architectural Draughtmanship	2	20	100 + 80(for Computer Lab)	25	4
76	Assistant Tourist Guide	2	20	56	25	4
77	Baker and Confectioner	2	20	96	25	16.6
78	Bamboo Works	2	20	100	25	10
79	Basic Cosmetology	2	20	70	25	6
80	Catering &Hospitability Assistant	2	16	64	25	19
81	Computer Aided Embroidery & Designing	2	16	64	25	5
82	Computer Operator and Programming Assistant	2	20	70	25	3.45
83	Dairying	2	25	125	25	3
84	Data Base System	2	20	70	25	3.45
85	Dental Laboratory Equipment Technician	4	20	120	25	12
86	Desk Top Publishing Operator	2	20	70	25	4.3
87	Digital Photographer	2	16	48	25	6.35
88	Dress Making	2	16	64	25	5
89	Fashion Design &Technology	2	16	64	25	5
90	Finance Executive	2	20	80 (50 + 30 Language Lab)	25	4

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom(Sq Mt)	Power Supply load (KW)
91	Fire Technology and Industrial Safety Management	2	20	*1,000 sq.mt. for practical Training ground can be away from the Institute at the distance of maximum 20 Kms. in safe zone	25	2
92	Floriculture & Landscaping	2	20	1 Hectare plot of land/10000 sq.mt.	25	2
93	Food Beverages	2	20	96	25	6
94	Food Beverages Guest Services Assistant	2	16	48	25	8
95	Food Production (General)	2	20	96	25	4
96	Footwear Maker	2	16	72	25	4
97	Front Office Assistant	2	20	56	25	4.5
98	Fruit & Vegetable Processing	2	20	96	25	5
99	Health Safety and Environment	2	20	*1,000 sq. mt. for practical Training ground can be away from the Institute at the distance of maximum 20 Kms. in safe zone	25	2
100	Health Sanitary Inspector	2	20	40	25	4
101	Horticulture	2	20	1 Hectare plot of land/10000 sq.mt.	25	2
102	Hospital House Keeping	2	20	40	25	5
103	House Keeper	2	20	40	25	4.5
104	Human Resources Executive	2	20	80 (50 + 30 Language Lab)	25	4

S. No.	Name of the Trade	No. of Semester	Unit Size	Space norms for Workshop per unit (Sq Mt)	Space Norms for Classroom(Sq Mt)	Power Supply load (KW)
105	Leather Goods Maker	2	16	72	25	4
106	Marketing Executive	2	20	80 (50 + 30 Language Lab)	25	4
107	Milk & Milk Products	2	20	96	25	6
108	Multimedia Animation & Special Effect	2	20	130 (Studio - 50sq.mt, Lab-80 Sq.mt.	25	6
109	Old Age Care	2	20	100	25	2
110	Photographer	2	16	48	25	7
111	Pre/Preparatory School Management (Assistant)	2	20	48	25	3
112	Process Cameraman	2	16	96	25	4
113	Secretarial Practice (English)	2	20	48	25	8
114	Sewing Technology	2	16	64	25	5
115	Software Testing	2	20	70	25	3.45
116	Spa Therapy	2	20	80	25	6
117	Stenographer and Secretarial Assistant (English)	2	20	48	25	8
118	Stenographer and Secretarial Assistant (Hindi) *(Ashulipi avam Sachivalay Sahayak (Hindi)*	2	20	48	25	8
119	Surface Ornamentation Techniques (Embroidery)	2	16	64	25	5
120	Travel &Tour Assistant	2	20	56	25	4.5
121	Weaving of Silk and Woolen Fabrics	2	16	144	25	17

- **Annexure –2E**

Space Requirement of ITI's and Various Trades under Craftsmen Training Scheme

1.1 Space Requirement in ITI's (Workshop Building) :The details of space requirement and electrical connected load for the trades is given in Annexure 2.F

1.2 **Space Norms for Workshop for ITI's** ¬

- It has been approved by the NCVT Sub Committee that the workshop for all trades must be rectangular in shape and width must not be less than 05 meter.
- All the walls of workshop, classroom, Principal room, staff room, Library, store , washroom, boundary wall of Institute etc. should be plastered and colour /distemper/ whitewashed.
- The minimum size of classroom shall be 25 sqm. With minimum width of 3 m.
- The walls of workshop made of tin sheet are not allowed.
- The minimum height of workshop must be 10 feet (3.048 meter) for RCC roof and 12 feet (3.65 meter) for tin shed roof from lower end.
- All built- up areas of Institute should be at least cemented/ tiled. Class rooms and Administrative areas, IT lab will be preferred flooring with tiles .The floor of workshop Institute should be at least cemented.
- All the door, window, ventilator, gate, grill, railing of the institute should be painted/polished.
- Keeping in view the escalating cost of land and non-availability of required land in urban areas, metropolitan and other cities, the National Council for Vocational Training (NCVT) deliberated and approved vertical expansion, with multi storied design for workshop with a condition that trades with heavy machineries to be housed only in the ground floor and remaining trades may be housed at any floor.
- Further, before housing any trade involving machineries at any floor other than ground floor, a certificate regarding safety/suitability of structure to house that trade from Civil/Structural Engineer would be necessary.
- It was also approved that as per building bye laws, building having more than three floors. Provision of lift would be mandatory. It is also recommended by NCVT that following trades requiring heavy machinery must be accommodated on ground floor . However on the basis of the certificate by structural engineer these trades can be allowed on the higher floors.

a) Welder,

b) Foundry man,

c) Mechanic Tractor,

d) Mechanic Diesel,

e) Mechanic Motor Vehicle,

f) Fitter,

g) Turner,

h) Machinist,

i) Sheet Metal Worker,

j) Carpenter,

k) Machinist Grinder,

l) Tool and Die Maker,

m) Building Constructor (Mason) &

n) Any other having single machinery weighing more than 200 kg

- All Government and Private ITIs need to set up an exclusive computer lab with Internet connectivity on every computer with multimedia, anti-virus software, latest operating software with UPS. The setup of the computer lab must have minimum ten computers / workstations and peripheral with internet facility irrespective of trade (s) or trade related computer requirement for an ITI up to seating capacity of 100 per shift. For each additional unit accredited/ affiliated, two computers / workstation must be added.
- The space norm to accommodate 10 computers for 100 trainees per shift is to be 25sq.m. and 2.5sq.m. for each additional computer.
- The space for Class Room, Principal Room, Staff Room, Drawing Room, Store Room, Auditorium, Library, Dispensary, Playground, Verandah and Washing Room etc., each should be available as mentioned in proposed norms .
- *The minimum width of the all rooms except workshops shall be 3 meters However for workshops minimum width is 05 meters.*
- Building plan shall be approved by Town Planning Department/ District Magistrate (Collector)/ Development Authority / Municipal Authority/ Any other Competent Authority as per State government / UT.