

भारत सरकार/कौशल विकास एवं उद्यमशीलता मंत्रालय  
Government of India / Ministry of Skill Development & Entrepreneurship  
DIRECTORATE GENERAL OF TRAINING (D.G.T)



राष्ट्रीय कौशल प्रशिक्षण संस्थान, कानपुर  
**NATIONAL SKILL TRAINING INSTITUTE, KANPUR**  
सी.टी.आई. चौराहा , संजय नगर , डाकघर –उद्योग नगर , कानपुर-208022



**TRAINING BROCHURE 2023-2024**

CTI Chouraha, Sanjay Nagar, P.O-Udyog Nagar, Kanpur, Uttar Pradesh  
208022

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## National Skill Training Institute Kanpur



**Shri J.D Masilamani, Regional Director NSTI Kanpur**

The National Skill Training Institute (NSTI) formerly known as Advanced Training Institute for Instructor training was set up by the Government of India in the year 1960 with the objective to train primarily the existing Vocational Instructors.

This is a prestigious Institute in the Northern Region functioning with the objective of meeting the training demands of the Industries/Institutions in the country. The Institute is having well equipped Workshop, Laboratories, Administrative Building, Audio Visual section, Library, Trainees Hostel, and Dispensary, staff Quarters etc.

In the context of rapid industrial expansion in the country, it became necessary that knowledge and skill of the existing workmen were updated and upgraded, So that the trained manpower may be utilized in upcoming and advanced skilled areas with competence and confidence. With the objective to meet with growing demand of highly skilled technician in country, the so trained, skilled manpower will serve the need of industry since eighties.

Industrial development/expansion has been faster than before. Computers, CNC Machines, Electro hydraulic & Electro Pneumatic control, Robotics, Microprocessors etc. have been adopted by most of the industries. In order to meet with the training needs arisen due to introduction and application of sophisticated technology in the production process, it became necessary to further develop the AVTS training. Accordingly Government of India , Ministry of Skill Development and Entrepreneurship introduced scheme for training in the highly advanced skill areas of NC/CNC, Electronics Maintenance system etc with the assistance of UNDP/ILP/World Bank. Necessary infrastructural facility was created and courses started. Keeping in peace the rapid growth of Industrialisation and use of sophisticated technology all over the world, NSTI Kanpur had upgraded the CNC Turning section, welding section, Advanced Electronic, Dress Making & Cutting & Swing for AVTS and CITS infrastructure and machinery in Institute. All above are done with regular suggestions of MSDE, New Delhi.

## OBJECTIVE:

Development of Skill and up gradation of level of technical personnel of industry and industrial Training Institute of Country, Who in turn skilled man power for country & abroad.

Our objective are

- ❖ To ensure steady flow of skilled worker to the industries in different trades.
- ❖ To raise the quality and quantity of the industrial production by systematic training of potential workers.
- ❖ To enhance employability of educated youth for skilled and supervisory jobs through training.
- ❖ To upgrade and update the skills of technical personnel of industries, Govt. Departments and Organizations for diversification in production and keeping them abreast with the technological advancement.
- ❖ To conduct need based training Program for industries, departments and organizations in the form of tailor made programs.
- ❖ Rendering consultancy in training/production techniques.

## VISION

- ❖ To provide innovative, effective and integrated training opportunities for people who need new skills to enjoy the dignity that comes with employment, independence and self-reliance.

## MISSION

- ❖ To continuously hone the skills of industrial workforce for higher productivity
- ❖ Bridging the gap between academics and industries for suitable placement for young generation in technical fields

## NSTI KANPUR TRAINING ARCHITECTURE:

**1. CRAFT INSTRUCTOR TRAINING SCHEME (CITS) PROFILE:** Craft Instructor Training is given to ITI pass trainees and Instructor of ITI in various trades in this institute. Objective of craft instructor training is to train instructor for training /teaching and transferring practical training to Instructors.

The trained Instructors are the skilled man power for the Govt & Pvt. ITIs as well as Industries. It is the structure of the training is so designed that it covers the comprehensive training in both skill development and methodology. This one year course is as:

## **TRADE AVAILABLE IN CITS IN NSTI KANPUR**

COMPUTER SOFTWARE APPLICATION	MACHINIST	DRESS MAKING
MOTOR MECHANIC VEHICLE	ELECTRICIAN	SEWING TECHNOLOGY
ELECTRONICS MECHANIC	TURNER	FITTER
WELDER		

**ELEIGIBLIGY FOR ADMISSION IN CITS:** NTC/NAC/Diploma/Degree in relevant trade /Branch of Engineering

**SELECTION:** Admission is offered in August every year on the basis of Computer based All India Common Entrance Test which is conducted centrally by DGT HQ.

**AGE LIMIT:** Minimum age 14 yrs, No upper age limit.

**2. SHORT TERM COURSES (AVTS) PROFILE:** Short term courses or Advance Vocational Training Scheme (AVTS) is for 1 week/2 week training for industrial Worker/Technicians/Supervisors/Engineers in a particular module for their skill up gradation. These courses are designed in various modules as per the need of industries and their personnel. In this institute such sector are chosen to give training at industrial man power and private technical student. These are as:-

*INFORMATION TECHNOLOGY      CAD/CAM/ CNC TURNING      3D PRINTING*  
*HYDRAULICS & PNEUMATICS      AUTOMOBILE ENGINEERING      ADVANCE WELDING*  
*METROLOGY & ENGG. INSPECTION      MMTM      ELECTRICAL CONTROL*  
*ELECTRONIC CONTROL      TRAINING METHODOLOGY      FASHION DESIGNING*

## **3. IBM DIPLOMA COURSE**

IBM Advance diploma Course in **"IT, Networking & cloud computing"** has started and 30 students took admission in session 2022-24.

**4. TAILOR MADE COURSE:** Designed and conducted as per the need of Industries

**5. JSS PROGRAMME:** JSS Recourse personnel Training (Training of Trainers) is conducting on demand basis.

**6. PMKVY/SHI Courses:** Conducted as per the direction of DGT.



## AVTS SHORT TERM TRAINING COURSES DETAILS: 2023-24

[illegible]

20301	Operation and programming of CNC Turning	01	09.10.2023	13.10.2023	20	Shri A.K.Misra Training Officer
20302			23.10.2023	27.10.2023		
20303			18.12.2023	22.12.2023		
20304			26.02.2024	01.03.2024		
<b>Course Contents:</b> Principles of CNC system & elements of CNC machines preparatory and miscellaneous codes different coordinate systems work offset, tool offsets part program of turning practice on simulation system selection of tools, speed, feed & depth of cut subroutine programming, machine cycles editing & proving the part program basic machine operations loading of component & machining of components.						
20401	Master Cam	01	06.11.2023	10.11.2023	20	Shri Ravi Pandey Vocational Instructor
20402			08.01.2024	12.01.2024		
20403			11.03.2024	15.03.2024		
Course Content: Design and drafting 2D and 3D models, tool path creations, tool path verifications, NC part program generation, Surface design and Machining using Master Cam, Understand advanced features of CAD/CAM						
20501	Additive Manufacturing /3D Printing	01	25.09.2023	29.09.2023	20	Shri A.K.Kesarwani Training Officer
20502			18.12.2023	22.12.2023		
20503			11.03.2024	15.03.2024		
<b>Course contents:</b> Introduction about 3D printing/ Additive manufacturing, 3D printing process, Various 3D printing technology and application of Additive manufacturing.						
<b>(3) HYDRAULICS &amp; PNEUMATICS</b>						
30101	Hydraulics & Pneumatics Control	01	09.10.2023	13.10.2023	20	Shri A.K.Kesarwani Training Officer
30102			08.01.2024	12.01.2024		
<b>Course contents:</b> Introduction to Pneumatics and Hydraulic Control Systems, Pneumatics & Hydraulic Symbol, Block Diagrams, and working principles. Construction of pneumatic and Hydraulic circuit with direct & indirect control. Application of Limit switches Relay, & Sensors.						
30201	Electro-Pneumatics & Hydraulics	01	30.10.2023	03.11.2023	20	Shri A.K.Kesarwani Training Officer
30202			29.01.2024	02.02.2024		
<b>Course contents:</b> Electro-Pneumatics & Electro-Hydraulic Symbol, Block Diagrams and working principles. Design of Electro-pneumatic and Electro-Hydraulic circuit using Sensors, Proximity switches, etc. Discussion of different application circuits. Single solenoid, double solenoid valves, electrical control components - relays, limit switches, proximity sensors, pressure switches, timers, counters, etc.						
<b>(4) AUTOMOBILE ENGINEERING</b>						
40101	Operation and Maintenance of MPFI and CRDI Engine	01	13.11.2023	17.11.2023	20	Shri A.K.Kesarwani Training Officer
40102			26.02.2024	01.03.2024		
<b>Course contents:</b> Introduction and working principle about MPFI and CRDI engines, Demonstration and operation of MPFI and CRDI engines, Maintenance and trouble shoot of MPFI and CRDI engines using diagnostic scanner.						
40201	Exhaust Gas Analysis for Diesel & Petrol Engine	01	25.09.2023	29.09.2023	20	Shri A.K.Kesarwani Training Officer
40202			20.11.2023	24.11.2023		
<b>Course Contents:</b> Exhaust Gas analysis of petrol engine, LPG, CNG engine using Multi Gas Analyzer of Diesel Engine using smoke meter.						
40301	Operation and Maintenance of Automobile AC	01	16.10.2023	20.10.2023	20	Shri A.K.Kesarwani Training Officer
40302			11.12.2023	15.12.2023		
<b>Course Contents:</b> Introduction HVAC system in automobile system in automobile car, operation & maintenance of Automobile AC.						
<b>(5) WELDING SECTION</b>						
50101	Advanced Welding Technology	01	26.06.2023	30.06.2023	20	Shri R.N.Savita Vocational Instructor
50102			06.11.2023	10.11.2023		
50103			08.01.2024	12.01.2024		
<b>Course contents:</b> Introduction of welding process, about Fusion welding, MMAW, TIG welding, MIG welding, MAG/Co2 welding, Flux cored, Arc welding, Submerged Arc welding, Soldering and Brazing.						

50201	TIG and MIG Welding	01	11.09.2023	15.09.2023	20	Shri R.N.Savita Vocational Instructor
50202			20.11.2023	24.11.2023		
50203			29.01.2024	02.02.2024		
<b>Course contents:</b> Introduction of TIG and MIG welding, advantage and limitations, equipment and power resources, welding Torch, shielding gases of TIG and MIG welding, Tungsten electrode for TIG welding, uses of AC& DC current in TIG welding, Manipulation of the Torch for MIG welding, 2T and 4T of MIG welding						
50301	Welding Inspection (NDT)	01	18.09.2023	22.09.2023	20	Shri R.N.Savita Vocational Instructor
50302			04.12.2023	08.12.2023		
50303			04.03.2024	08.03.2024		
<b>Course contents:</b> Introduction to Non Destructive test, Testing of Calibrated block 11W-V1 and 11W-V2, Relation between frequency and weave, Types of Sonic, probe of Transducer, Piezo current.						
50401	Virtual Reality (VR)	01	09.10.2023	13.10.2023	20	Shri R.N.Savita Vocational Instructor
50402	Welding Simulator		18.03.2024	22.03.2024		
<b>Course contents:</b> Introduction of Virtual Reality (VR) welding simulator, setup of simulator machine, Job setting, position setting and current setting. Troch and Filler wire connection, Room Setup.						
<b>(6) METROLOGY &amp; ENGG. INSPECTION</b>						
60101	Engg. Inspection & Quality Control	01	11.09.2023	15.09.2023	20	Shri H.B.Meena Training Officer
60102			09.10.2023	13.10.2023		
60103			13.11.2023	17.11.2023		
<b>Course Contents:</b> Introduction to inspection and quality control, limits, fits, tolerances and limit gauges, linear measurements, optical measuring instruments, calibration techniques, error in measurement process, Practices in dimensional measurements using precision measuring instruments conventional and digital instruments						
<b>(7) MECHANICAL MACHINE TOOLS MAINTENANCE</b>						
70101	Maintenance of Machine	01	18.09.2023	22.09.2023	20	Shri Dinesh Kumar Training Officer
70102	Tools		16.10.2023	20.10.2023		
70103			15.01.2024	19.01.2024		
<b>Course Contents:</b> Industrial safety introduction to machine tool maintenance and types of maintenance, Bearing – types, specification, and inspection, Bearing selection, bearing failures, causes and remedy. Preventive maintenance, checklist for preventive maintenance, Geometrical Test, Tools & appliances using in Transportation of machine tools.						
<b>(8) ELECTRICAL CONTROL</b>						
80101	AC/DC Drive and speed control of Electrical Motors	01	11.09.2023	15.09.2023	20	Shri A.S.S.Meena Asth. Director
80102			16.10.2023	20.10.2023		
80103			04.12.2023	08.12.2023		
80104			19.02.2024	23.02.2024		
<b>Course contents:</b> Basics of AC/DC drive and speed control of Electrical Motor, about speed control method, safety issues with related to AC/DC drive and speed control and its applications in various sectors.						
80201	Maintenance of AC Motors and Transformer	01	26.06.2023	30.06.2023	20	Shri A.S.S.Meena Asth. Director
80202			23.10.2023	27.10.2023		
80203			18.12.2023	22.12.2023		
80204			26.02.2024	01.03.2024		
<b>Course contents:</b> Introduction about maintenance of Electrical Motor and Transformers. Types and safety issues of AC Motor and Transformer and its advantage.						
<b>(9) ELECTRONICS CONTROL</b>						
90101	Industrial Automation using PLC	01	11.09.2023	15.09.2023	20	Shri V.K.Sharma Vocational Instructor
90102			13.11.2023	17.11.2023		
90103			15.01.2024	19.01.2024		
<b>Course Contents:</b> Modular architecture of PLC, working principle of PLC, specification of PLC Modules, Implementation of relays, timers and counters using PLCs.						
90201	Digital Electronics and its Application	01	25.09.2023	29.09.2023	20	Shri V.K.Sharma Vocational Instructor
90202			04.12.2023	08.12.2023		
90203			29.01.2024	02.02.2024		

<b>Course Contents:</b> Demonstrate the basic logic GATE, Combinational Circuit, Flip-Flop, Counter & Shift Register.						
90301	Power Electronics and its Devices	01	09.10.2023	13.10.2023	20	Shri V.K.Sharma Vocational Instructor
90302			18.12.2023	22.12.2023		
90303			12.02.2024	16.02.2024		
<b>Course Contents:</b> Introduction and working principle of silicon controlled rectifier converter, inverter, chopper, DTO, SUS, SBS, DIAC, TRIAC, IGBT, SCS, Thyristor, and Commutation.						
90401	Sensors, Transducers and its Application	01	30.10.2023	03.11.2023	20	Shri V.K.Sharma Vocational Instructor
90402			01.01.2024	05.01.2024		
90403			26.02.2024	01.03.2024		
<b>Course Contents:</b> Basic of passive and active transducers, working principle of Thermistors/ Thermocouples, LVDT and Strain Gauge, capacitive and inductive proximity sensors, Advantage, disadvantage and application of transducer						
<b>(10) TRAINING METHODOLOGY (TM)</b>						
100101	Refresher Course on Modern Teaching Techniques	01	11.09.2023	15.09.2023	20	Shri R.K.Sahu Training Officer
100102			09.10.2023	13.10.2023		
100103			06.11.2023	10.11.2023		
100104			11.12.2023	15.12.2023		
Course contents: Modern principle of teaching and training. Microteaching, Pedagogy and group discussion						
100201	Training of Trainers	01	04.09.2023	08.09.2023	20	Shri V.K.Sharma Vocational Instructor
100202			16.10.2023	20.10.2023		
100203			29.01.2024	02.02.2024		
100204			26.02.2024	01.03.2024		
Course contents: Skill scenario of India, NSQF introduction, level descriptor, training/leaning outcome, adult learning, soft skill, NSQF interpretation, going through NSQF curriculum for various sectors of JSS, assessment criteria, lesson and demo Plan						
<b>(11) FASHION DESIGNING</b>						
110101	Pattern Design using REACHCAD Software (PDS. Grading & Maker)	02	11.09.2023	22.09.2023	20	Shri R.K.Sahu Training Officer
110102			09.10.2023	20.10.2023		
110103			04.12.2023	15.12.2023		
110104			15.01.2024	26.01.2024		
110104			05.02.2024	16.02.2024		
110105			04.03.2024	15.03.2024		
Course contents: Preparation of Pattern making, Grading and Marker for selected garments.						

## ELEIGIBLIGY CRITERIA FOR AVTS PROGRAMME

- (i) Minimum qualification ITI/Diploma /Engineering in relevant trade or branch of Engineering. Appearing students in these trade/branches may also apply for training.
- (ii) Industrial man power with ITI/Diploma/engineering with some experience may apply or take admission in these courses
- (iii) Government employees/officers, public sector employees and big and small industry personnel with technical qualification can also come for training.



## FEES STRUCTURE:

- Application fee cum Registration fee Rs. 100/- per participant per course
- Gymkhana fee @ Rs. 10/- per courses per participant
- Mode of payment: Payable in form of DD in favour of "DDO, RDSDE-Kanpur, payable at Kanpur at the time of admission or through online.
- Limited Hostel facilities are also available on first come first serve basis. Hostel rent Rs. 100/- per day/participant. Participants should bring winter clothing between November to March as atmospheric temperature drops up one degree centigrade in Kanpur during winter.

### Tuition Fees:

Sl no.	Category	Rate of Tuition fee per trainee per week	
		Regular Schedule	Tailor Made
1	Nominees from Govt., Dept., viz, Railway, Defence etc.	Rs. 1250.00	Rs. 2500.00
2	Nominees from medium and large scale industries both public and private sector.	Rs. 2000.00	Rs. 4000.00
3	Nominees from small scale industries and Pvt. Candidates	Rs. 1000.00	Not Applicable
4	Nominees from institute like polytechnic engg. Collages & other related Tech. institute etc.	Rs. 1000.00	Rs. 2000.00
5	Nominees from State Directorates	NIL	Not Applicable

## GENERAL:

1. Nominations should reach the institute in advance at least 15 days before the commencement of each course.
2. Payment of tuition fee is to be made on the date of commencement of the course itself by Demand Draft duly crossed in favor of "Drawing & Disbursing Officer", RDSDE-UP payable at Kanpur.
3. Saturday and Sunday are holiday working hours are from 09:00 hrs. to 17:30 hrs.
4. If Monday is a holiday, the scheduled course will commence on next working day and if Friday is a holiday, the course will conclude on the previous working day.
5. To reach the institute: from Kanpur railway station (City Side) approx... 10 Kms. Bus/Tampo and Auto Rickshaw are available to CTI Chauraha (Govind Nagar) Kanpur.

6. All correspondence should be addresses to **Regional Director, National Skill Training Institute, Post- Udyog Nagar, Kanpur-208022**

**APPLICATION FORM:** Please scan QR Code & apply online through google form



**Application Form Link:** <https://forms.gle/BSrbGu7wFeubVsWS6>

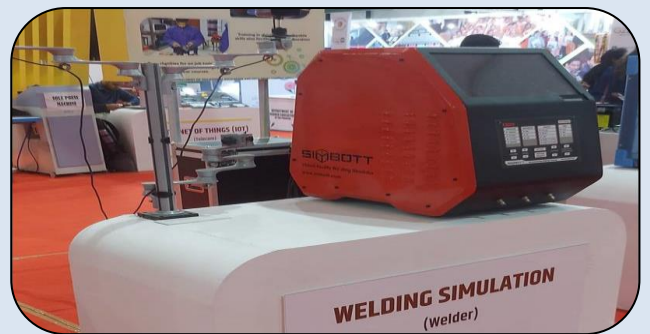
**NOTE**

DGT/Regional Director/Principal of Institute reserves the right to cancel or postpone any course without assigning any reason.

## Photo Gallery



ELECTRONICS CONTROL



WELDING SECTION



FITTER



AUTOMOBILE ENGINEERING



FASHION DESIGNING



INFORMATION TECHNOLOGY



ELECTRIC CONTROL



MACHINIST



MECHANICAL MACHINE TOOLS MAINTENANCE



TURNER