

CRAFTSMEN TRAINING SCHEME (CTS)

The National Skill Training Institute (NSTI), Government of India, Ministry of Skill Development & Entrepreneurship, Regional Directorate of Skill Development & Entrepreneurship at Mumbai, is conducting Craftsmen Training Scheme (CTS) under the aegis of NCVET. The session will be commenced from 1st July/August, in the following trades:-

SL. NO.	TRADES AVAILABLE	SANCTIONED SEATS	DURATION
1	IoT (Smart Health Care)	24 Seats	01 Year
2	Solar Technician(Electrical)	20 Seats	01 Year

ELIGIBILITY

10th class or its equivalent with Science and Maths

Online application is invited on www.nimionlineadmission.in from the eligible candidates desiring admission.



ADVANCE DIPLOMA

Directorate General of Training (DGT), Ministry of Skill Development and Entrepreneurship (MSDE) has signed a Memorandum of Understanding (MoU) with IBM India Private Limited in Feb 2018 to offer **Advanced Diploma in 'IT, Networking and Cloud Computing'** by using high-end skill training facilities at NSTIs. IT, Networking and Cloud is very much essential in the current scenario due to lot of demand in software industries where every industry is using cloud as base.

A CANDIDATE WHO HAS COMPLETED THIS COURSE:

- Can start their own enterprise on cloud maintenance, computer hardware maintenance, website development etc.
- Can apply for jobs in industry as system technician, cloud developer, web designer etc.
- Can apply for any job as a regular diploma holder.
- Can apply for lateral entry to higher studies like B. Tech.

COURSE STRUCTURE:

The course is of two years duration. In the first year there are five core modules. Each module is of 320 hours. In the second year, the trainees will be taking two elective modules out of three electives each of 320 hours and will be doing on the job training in industry for 800 hours. In addition the trainees will pick up employability skills for 160 hours.

ON THE JOB TRAINING

In the second year, the trainees will be taking two elective modules out of three electives each of 320 hours and will be doing on the job training in industry (IBM) for 800 hours. In addition the trainees will pick up employability skills for 160 hours.

Online application is invited on www.nimionlineadmission.in from the eligible candidates desiring admission.

CRAFT INSTRUCTOR TRAINING SCHEME (CITS)

National Skill Training Institute Mumbai established by Government of India, Ministry of Skill Development & Entrepreneurship, offers Craft Instructor Training under CITS of one year duration for various trades combining Trade Technology(TT), Engineering Technology (ET) and Training Methodology (TM). Primary objective of this Institute are to train the Vocational Instructors of various Industrial Training Institutes / Centres and other training establishment. Training of Craft Instructors is the mandated responsibility of DGT and It has been operational since the inception of the Craftsmen Training Scheme (CTS). Comprehensive training both in skills and training methodology is imparted to the instructor trainees to make them conversant with techniques of transferring hands-on skills, to train skilled manpower for the industry.

PROGRAMME STRUCTURE :

The duration of Crafts Instructor Training is One year. Combination of Subjects:The following subjects are covered

Trade Technology

Comprising of Basic & Advanced components of trade practice and theory

Engineering Technology

Comprising of Workshop Calculations & Science and Engineering Drawing

Training Methodology

Comprising of Teaching Practice and Principles of Teaching

Start of session: 1st August of every year.

ADMISSION & AWARD OF CERTIFICATE

Admission is done through All India Common Entrance Test which is conducted centrally by DGT HQ. Candidates can enroll for the above programme for one year. A candidate has to secure 60 % Sessional marks in Theory and Practicals and also have a minimum of 80 % attendance. On possessing the above requisites, candidates will be allowed to appear for the final examination conducted by NCVT, New Delhi in June/July every year. On passing the prescribed exam, trainees will be awarded the Instructor training Certificate from NCVT.

Online application is invited on www.nimionlineadmission.in from the eligible candidates desiring admission.

TRADES AVAILABLE UNDER CITS AT THIS INSTITUTE

1	Computer Software Application (CSA)	100 Seats
2	Draughtsman Mechanical	50 Seats
3	Electrician	100 Seats
4	Electronics Mechanical	50 Seats
5	Turner	50 Seats
6	Fitter	150 Seats
7	Machinist	75 Seats
8	Instrument Mechanic	50 Seats
9	Mechanic Motor Vehicle	50 Seats
10	Welder (G&E)	50 Seats



TUITION FEE STRUCTURE FOR SHORT TERM COURSES

Category	Fee per Week per Trainee	
	Regular Course	Tailor made course
Medium/Large Scale Industries both Pvt & Public Sectors	Rs.2000/-	Rs.4000/-
Small Scale Industries (SSI) & Private Candidates	Rs.1000/-	-
Govt. Department e.g. Railways/ Defence etc.	Rs.1250/-	Rs.2500/-
Educational Institutes like Polytechnics, Engineering Colleges etc.	Rs.1000/-	Rs.2000/-

Hostel Rent : Rs.100/- per trainee per day (on sharing basis)
Gymkhana Fee : Rs.10/- For Regular courses per trainee per course payable in cash at the time of admission.
Rs.15/- For Tailor made courses per trainee per course payable in cash at the time of admission.
Registration Charges : Rs.100/- Completed application should reach the Institute at least 20 days before the commencement of the course. Apply separately for each course.

Tuition & Registration Fee will be paid through government website : bharatkosh.gov.in for private candidates
 Tuition Fee and Registration charges please pay by Cheque or DD in favour of "PAO, MSDE, MUMBAI" for deputed candidates

ENTRY QUALIFICATIONS

- Degree / Diploma in relevant branch of Engineering or NTC /NAC with 2/3 in relevant trade experience.
- For Industrial Chemistry : B.Sc. with Chemistry
- For SCADA Programming & Application : Knowledge of PLC Programming & Applications
- For Computer Awareness & MS Office : S.S.C. / H.S.C.
- For Basic Car Maintenance : S.S.C./ H.S.C. with Driving Licence.

FOR SPONSORED CANDIDATES

Candidates with Matriculation or equivalent with Science and Maths with 3/5 years trade experience and sponsored by Industry, Ministry / Organisation.

NOTE

- The Regional Director may change/cancel any programme without assigning reason.
- If Monday is holiday, the scheduled course will commence on next working day and if Friday is holiday the course will conclude on the previous working day.
- Nominees/participants should not start their journey for joining any course without receiving confirmation from this Institute. If confirmation is not received, it may be obtained over telephone or e-mail to avoid embarrassment due to cancellation of the course by chance.
- At the end of the courses, Certificate will be issued to the trainees who have successfully completed the course with attendance of 80% and above only.
- Application / Nominations received without prescribed application cum registration charges will be rejected.
- Xerox copies of Qualification (Marksheet), experience should be attached with application,
- Original Marksheet should be produced at the time of admission.
- Application / Nominations should reach this Institute at least 3 weeks prior to the date of commencement of course.
- Seats will be confirmed to selected candidates only.

FOR FURTHER DETAILS, CONTACT :

The Regional Director,
 National Skill Training Institute,
 V. N. Purav Marg, Sion, Mumbai-400 022.
Phone : 91-22-2405 3560 **E-mail :** atimumbai@nic.in
Website : nstimumbai.dgt.gov.in



GOVERNMENT OF INDIA
M/O SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING
NATIONAL SKILL TRAINING INSTITUTE
 V. N. Purav Marg, Chunabhathi, Sion (East), Mumbai - 400 022.
Phone : 91-22-2405 35 60
 E-mail : atimumbai@nic.in Website : nstimumbai.dgt.gov.in

SHORT TERM TRAINING CALENDAR :2022-2023

Short Term Courses Conducted for Reskilling and Upskilling



ST.1 ADVANCED ELECTRONICS

Course Name	Duration (Weeks)	Intake Capacity	From	To
PLC Programming and Applications (Rockwell Automation & Siemens)	2	10	12.12.22 13.02.23	23.12.22 24.02.23
Rockwell Automation PLC and SCADA Programming	2	10	23.01.23	03.02.23
Advanced PLC and SCADA Programming (Control Logix L61)	2	10	13.03.23	24.03.23
Introduction and Programming of Microprocessor(8085) and Microcontroller(8051)	2	10	02.01.23	13.01.23

BRIEF COURSE CONTENTS (ST.1 ADVANCED ELECTRONICS)

Course Name	Brief Course Contents
PLC Programming and Applications (Rockwell Automation & Siemens)	PLC General features/advantages. Selection of IO Modules Ladder Programming techniques Instruction set for Rockwell(Allenbradley) and siemens. Simple Program with Rockwell/Siemens PLC
Rockwell Automation PLC and SCADA Programming	Rockwell PLC General features/advantages. Selection of IO Modules Ladder Programming techniques Instruction set for Rockwell(Allenbradley). Features of SCADA. Simple Program with Factory talk Activation SCADA
Advanced PLC and SCADA Programming (Control Logix L61)	PLC General features/advantages. Selection of IO Modules Ladder Programming techniques Instruction set for Rockwell (Allenbradley). Simple Program with Control logix L5661, Features of SCADA. Simple Program with Factory talk Activation SCADA
Introduction and Programming of Microprocessor (8085) and Microcontroller (8051)	Basics and architecture 8085, Types of Instruction sets, Assembly language programming. 8051 Programming, Introduction about arduino

SHORT TERM TRAINING COURSES FOR THE YEAR 2022-2023

ST.2 ADVANCED WELDING

Course Name	Duration (Weeks)	Intake Capacity	From	To
Gas Tungsten Arc Welding on Aluminium Plate	1	12	02.01.23	13.01.23
Gas Tungsten Arc Welding on Stainless Steel Plate	1	12	06.02.23	10.02.23
Gas Metal Arc Welding on Stainless Steel Plate (MIG)	1	12	20.02.23	24.02.23
(GMAW) CO2 Welding(MAG)	1	12	06.03.23	10.03.23
Plasma & Oxy-Fuel Gas Cutting on Ferrous & Non - Ferrous Metals	1	12	20.03.23	24.03.23
Submerged Arc Welding (SAW)	1	12	12.12.22	16.12.22

ST.3 AUTOMOBILE

Course Name	Duration (Weeks)	Intake Capacity	From	To
Maintenance, servicing and overhauling of Auto Electrical / Electronic system	1	15	05.12.22	09.12.22
Maintenance, servicing and overhauling of Automotive Petrol Engine	1	10	02.01.23 27.02.23	02.01.23 27.02.23
Maintenance, servicing and overhauling of Automotive Diesel Engine.	1	15	16.01.23	20.01.23
Basic car Maintenance	1	15	30.01.23 13.03.23	03.02.23 17.03.23
Basic Servicing and Maintenance of Electric Vehicle	1	10	19.12.22 06.02.23	23.12.22 10.02.23

ST.4 ELECTRICAL MAINTENANCE

Course Name	Duration (Weeks)	Intake Capacity	From	To
AC Drive (SIEMENS MICROMASTER -440)	1	10	13.03.23	17.03.23
AC Electric Motors- Testing, Operation & Maintenance	2	10	02.01.23	13.01.23
Starter Soft Starter	1	10	26.12.22	30.12.22

ST.5 INDUSTRIAL CHEMISTRY

Course Name	Duration (Weeks)	Intake Capacity	From	To
Analysis by High Performance Liquid Chromatography (Basic - Isocratic)	1	10	06.02.23 13.03.23	10.02.23 17.03.23
Analysis by Gas Chromatography	2	10	30.01.23 20.03.23	03.02.23 24.03.23

BRIEF COURSE CONTENTS (ST.2 ADVANCED WELDING)

Course Name	Brief Course Contents
Gas Tungsten Arc Welding on Aluminium Plate	Aluminum and its properties, type of machine, inert gas, and tungsten alloy electrode, fusion of aluminum metal & filler rod, hand on practice with different position /joint on aluminum metal.
Gas Tungsten Arc Welding on Stainless Steel Plate	Stainless steel and its properties, type of machine, inert gas, and tungsten alloy electrode, fusion of stainless steel & filler rod, hand on practice with different position/joints on stainless steel metal.
Gas Metal Arc Welding on Stainless Steel Plate (MIG)	Welding safety, Process feature, power sources, wire feed system, selection of welding parameters, shielding gases, welding defects, hand on practice with different joints & position
(GMAW) Co2 Welding (MAG)	Welding safety, Process feature, power sources, wire feed system, selection of welding parameters, active gas, welding defects, hands on practice with different joints & position
Plasma & Oxy-Fuel Gas Cutting on Ferrous & Non Ferrous Metals	Safety related to various metals cutting processes, concept & need for plasma cutting, straight & bevel cutting on ferrous & non-ferrous metal.
SAW - Submerged Arc Welding	Welding safety, Process feature, power sources, setting of SAW plant, principle of SAW, wire feed system, selection of welding parameters, welding defects, hands on practice with different joint/position

BRIEF COURSE CONTENTS (ST.3 AUTOMOBILE)

Course Name	Brief Course Contents
Maintenance, servicing and overhauling of Auto Electrical / Electronic system	Trouble tracing in wiring Circuits. Trace wiring and prepare wiring diagram. Servicing Electrical Components of vehicle
Maintenance, servicing and overhauling of Automotive Petrol Engine	Maintenance of Petrol Engine. Servicing different sub systems of Petrol Engine. Petrol Engine Tune UP
Maintenance, servicing and overhauling of Automotive Diesel Engine.	Maintenance of Diesel Engine. Servicing different sub systems of Diesel Engine. Diesel Engine Tune UP
Basic car Maintenance	Preventing and periodic Maintenance of Car. Understand Various system of Car. Car Washing and Servicing
Basic Servicing and Maintenance of Electric Vehicle	Basic maintenance Electrical vehicle. Understand different parts of EV.

BRIEF COURSE CONTENTS (ST.4 ELECTRICAL MAINTENANCE)

Course Name	Brief Course Contents
AC Drive (SIEMENS MICROMASTER -440)	Basics of AC Drives, Features, Installation, Commissioning, System parameters, Parameterization, Faults & Alarms, Trouble Shooting, Drive Monitor, Applications.
AC Electric Motors - Testing, Operation & Maintenance	Three Phase Motors: Squirrel Cage Induction Motors, Slip ring induction motors, double squirrel cage induction motors, synchronous motor; Single phase motors: Capacitor induction motor, repulsion motor, universal motor, shaded pole motor; Types of enclosures; Motor Protection; Power factor. Testing, troubleshooting & Maintenance of AC Motors and controls.
Starter Soft Starter	Starters: DOL, Auto transformer & Star-delta starters (manual, semiautomatic, automatic) Soft Starter: Description, Mounting Connections, HMI, Setting & Configuration, Maintenance, Functions, Trouble Shooting, Applications.

BRIEF COURSE CONTENTS (ST.5 INDUSTRIAL CHEMISTRY)

Course Name	Brief Course Contents
Analysis By High Performance Liquid Chromatography (Basic - Isocratic)	Introduction of Liquid Chromatography. Instrumentation of HPLC & it's calibration, analysis of different samples single & mixtures. Determination of assays of different samples. Determination of caffeine content of cold drink, tea, coffee etc.
Analysis by Gas Chromatography	Introduction, principle, instrumentation, separation & temperature programming of Gas Chromatography. Analysis of different samples like binary, tertiary, quaternary or more combination including temperature programming. Determination of % composition of sample mixture by calibration curve, internal standard, external standard method.

ST.6 MACHINE TOOL MAINTENANCE

Course Name	Duration (Weeks)	Intake Capacity	From	To
Preventive Maintenance of Machine Tools	1	15	05.12.22 02.01.23 13.02.23 27.03.23	09.12.22 06.01.23 17.02.23 31.03.23
Bearing & lubrication	1	15	12.12.22 09.01.23 20.02.23 20.03.23	16.12.22 13.01.23 24.02.23 24.03.23
Repair & Maintenance of Lathe & Milling Machine	1	15	19.12.22 16.01.23	23.12.22 20.01.23

ST.7 ADVANCED TOOL & DIE MAKING

Course Name	Duration (Weeks)	Intake Capacity	From	To
Jig & Fixture Making	1	10	06.02.23	10.02.23
Tool Room Precision Machine	1	10	13.03.23	17.03.23

ST.8 CNC

Course Name	Duration (Weeks)	Intake Capacity	From	To
CNC Programming and Machining on Turning (Fanuc / Siemens)	2	10	05.12.22 02.01.23 30.01.23 13.02.23 06.03.23 20.03.23	16.12.22 13.01.23 10.02.23 24.02.23 17.03.23 31.03.23

ST.9 PROCESS CONTROL INSTRUMENTATION

Course Name	Duration (Weeks)	Intake Capacity	From	To
Honeywell DCS programming and Applications	1	10	05.12.22 23.01.23	09.12.22 27.01.23
Process Instrumentation and control	1	10	12.12.22 06.02.23 20.03.23	16.12.22 10.02.23 24.03.23
PID controller and Tuning	1	10	02.01.23 20.02.23	06.01.23 24.02.23
Smart Process Devices and its applications	1	10	16.01.23 06.03.23	20.01.23 10.03.23

ST.10 UNIT OPERATION LAB

Course Name	Duration (Weeks)	Intake Capacity	From	To
Operations and Maintenance of Pumps & Valves	1	15	13.02.23 03.03.23	17.02.23 07.03.23
Heat Transfer Operations	1	10	27.02.23 24.03.23	03.03.23 28.03.23

ST.11 RENEWABLE ENERGY

Course Name	Duration (Weeks)	Intake Capacity	From	To
Designing, Testing & Maintenance of Solar PV System	1	20	05.12.22 20.03.23	09.12.22 24.03.23
Installation & Commissioning Skills of Solar PV System	1	20	06.02.23	10.02.23

For further details refer to Website : www.nstimumbai.dgt.gov.in

BRIEF COURSE CONTENTS (ST.6 MACHINE TOOL MAINTENANCE)

Course Name	Brief Course Contents
Preventive Maintenance of Machine Tools	Theory & Practical - Introduction to Machine Tool Maintenance, Selection and maintenance of lubricants, Maintaining history card and inspection records of machines, PM sheet, machine tool repair and inspection. Types of lubrication, Preventive Maintenance of Various machine tools, Dismantling and overhauling
Bearing & Lubrication	Theory & Practical - Bearing - types, specification, and inspection, Bearing selection, bearing failures, causes and remedy, Lubricant types, characteristics, oil selection and lubrication methods, Condition monitoring of bearings Failure Analysis..Mounting of bearing using Bearing mounting kit, Mounting of bearing using Induction heater,Bearing Analysis meter .
Repair & Maintenance of Lathe & Milling Machine	Theory & Practical - Introduction of Lathe & Milling machine, functioning, Dismantling & assembly of various parts of lathe & milling machine.

BRIEF COURSE CONTENTS (ST.7 ADVANCED TOOL & DIE MAKING)

Course Name	Brief Course Contents
Jig & Fixture Making	Theory & Practical -Introduction of jig making ,Various types of jig, Parts, Function Design of jig, fixture, Types of fixture , types of fastener, clamps & locating.
Tool Room Precision Machine	Theory & Practical -Industrial Safety, Introduction of jig boring machine, decal milling machine, Optical profile grinder & pantograph machine, All types of tool room machine, all milling cutter and holding device

BRIEF COURSE CONTENTS (ST.8 CNC)

Course Name	Brief Course Contents
CNC Programming and Machining on Turning (Fanuc / Siemens)	Introduction to NC, CNC & historical perspective of CNC, Introduction to CNC Control panelAxes designation, Co ordinate system, work Off set, Canned Cycles & Practical, Introduction to Roughing and finishing cycles- G71 & Practical &G70, RoughinG72 & Practical, Grooving Cycles-G76 & Practical,Drilling Cycles-G74 & Practical,Threading Cycle-G76 & Practical, Stock removal/ Finishing/grooving & Practical, Threading Cycle/Practical/Test, Practical on different Modes of Operations

BRIEF COURSE CONTENTS (ST.9 PROCESS CONTROL INSTRUMENTATION)

Course Name	Brief Course Contents
Honeywell DCS programming and Applications	Basics of DCS, architecture, familiarisation on Configuration studio, Digital I/O controls, Analog I/O controls, Programming on Digital logics and feed back control loops
Process Instrumentation and control	Various process measuring sensors and transmitters testing, Testing of Final control element (control valve), Testing and tuning of Various PID control loops
PID controller and Tuning	Basics of PID controllers, various FCE, PID controller various tuning parameters, Interfacing and testing of sensors and FCE, Tuning and testing on various PID loops
Smart Process Devices and its applications	Pressure, Flow, Level, Temperature sensors and transmitters. Calibration of various measuring transmitters, tuning parameters of HART transmitters using HART calibrator.

BRIEF COURSE CONTENTS (ST.10 UNIT OPERATION LAB)

Course Name	Brief Course Contents
Operation and Maintenance of Pumps & Valves	Maintenance, Overhauling & Troubleshooting of 1. Different types of Pumps-volute / turbine centrifugal pumps, multi-stage centrifugal, spur gear pump, reciprocating (Piston & Plunger), mono screw pump, plunger type metering pump, double diaphragm pump, oil ring and water ring vacuum pumps. etc. 2. Different types of Valves gate - valves, globe valves, butterfly valves, ball valves, needle valves. non-return valves- foot valves, check valves lift & swing types, safety valves, pneumatic control valve, solenoid valve, etc.
Heat Transfer Operations	Maintenance & Trouble shooting of different types of Heat Transfer equipments such as Heat exchangers (such as double pipe, 1-2 shell & tube, plate, spiral tube). Non - IBR boilers forced draft cooling tower, single effect evaporator and multiple effect evaporator.

BRIEF COURSE CONTENTS (ST.11 RENEWABLE ENERGY)

Course Name	Brief Course Contents
Designing, Testing & Maintenance of Solar PV System	Components of a Solar PV Electrical system; Load calculation; Battery sizing; Inverter specifications; Panel sizing; Charge controllers; Protection circuits; Modular projects; Features of Planet Earth which influence solar PV electrical; Periodical monitoring; Preventive maintenance; Corrective maintenance; Document and record
Installation & Commissioning Skills of Solar PV System	Solar system & Earth features influencing Solar PV Electrical system; Components of a SPV Electrical system; Types; Applications; bill of materials; Test points; Test before & after commissioning; Safety handling; storing; Tools and equipments; Solar panel Mounting skills; Foundation planning and construction skills; Electrical wiring skills; Safety points; Commissioning skills; Maintenance skills