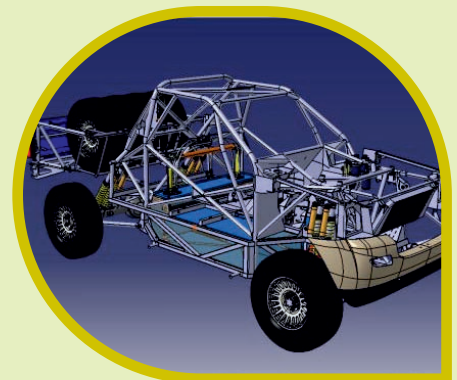
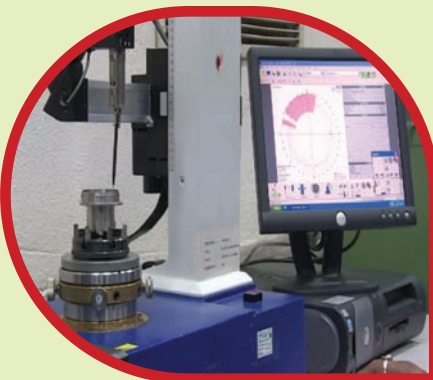


TRAINING PROGRAMME

2016-2017



CENTRAL TOOL ROOM & TRAINING CENTRE
BHUBANESWAR



AS 9100,
ISO 9001, 14001, 29990, 50001 &
OHSAS 18001 CERTIFIED

PRESENTING SKILL DEVELOPMENT COURSES FOR ENGINEERING STUDENTS

Central Tool Room & Training Centre (CTTC), Bhubaneswar is the leading Tool Room & Training Centre of India to impart skill based training programme in the field of **CAD/CAM/CAE/CNC Technology/ Structural Design & Analysis/ Hardware & Network / VLSI/ PLC/ MAT LAB/ Robotics** for Engineering students. In the year 2015-16; CTTC had offered training to **25678** Engineering students including 4870 girls' students from 180 Engineering colleges of different states of India. For the year 2016-17 we offer skill development courses throughout the year specially designed for Mechanical/ Production/ Automobile/ Manufacturing Science/ Civil/ Computer Science/ Electrical/ Electronics/ Instrumentation/ Information Technology Students.

COURSES FOR DIPLOMA/DEGREE IN MECHANICAL ENGINEERING OR EQUIVALENT

COURSE NAME	DURATION	Hrs./Day	COURSE FEE
Auto CAD (Mechanical)	1 Month	3	₹ 6,500/-
CATIA	1 Month	3	₹ 7,500/-
Creo	1 Month	3	₹ 7,500/-
UNIGRAPHICS	1 Month	3	₹ 7,500/-
SOLIDWORKS	1 Month	3	₹ 7,500/-
MASTER CAM	1 Month	3	₹ 7,500/-
CNC Milling & Turning	1 Month	3	₹ 7,500/-
ANSYS	2 Weeks	3	₹ 7,500/-
3D Printing & Scanning	2 Weeks	3	₹ 7,500/-
Advance Diploma in CNC Programming & Practice (ADCNC)	6 Month	6	₹ 30,000/-
Post Diploma in Tool Design & Manufacturing (PDTDM)	1 Year	8	₹ 50,000/-
Master of CAD/CAM (MCC)	6 Month	8	₹ 32,000/-
Post Graduate in Tool Engineering (PGTE)	1 Year	8	₹ 60,000/-
Post Graduate in Aerospace Manufacturing (PGAM) for Degree	1 Year	8	₹ 60,000/-

COURSES FOR DIPLOMA/DEGREE IN ELECTRONICS ENGINEERING OR EQUIVALENT

COURSE NAME	DURATION	Hrs./Day	COURSE FEE
PLC	1 Month	3	₹ 7,500/-
VLSI	1 Month	3	₹ 7,500/-
SCADA	1 Month	3	₹ 7,500/-
Advanced Embedded System	1 Month	3	₹ 7,500/-
ROBOTICS	1 Month	3	₹ 7,500/-
Lab View	1 Month	3	₹ 7,500/-
E.CAD	1 Month	3	₹ 7,500/-
Advance Diploma in M/C Maintenance & Automation (ADMMA)	6 Month	6	₹ 30,000/-
Advance Diploma in VLSI & Embedded System (ADVES)	6 Month	6	₹ 30,000/-
Master Certificate Course in Automation & Process Control (MCCAPC)	6 Month	6	₹ 32,000/-
Post Graduate in Industrial Automation & Robotics (PGIAR)	1 Year	6	₹ 60,000/-

COURSES FOR DIPLOMA/DEGREE IN CIVIL ENGINEERING

COURSE NAME	DURATION	Hrs./Day	COURSE FEE
Auto CAD (Civil)	1 Month	3	₹ 6,500/-
STAAD PRO/ 3Ds Max/ REVIT	1 Month	3	₹ 7,500/-
Advanced Diploma/Degree in Structural Design & Analysis (ADSDA)	6 Month	4	₹ 30,000/-

COURSES FOR ANY GRADUATE

COURSE NAME	DURATION	Hrs./Day	COURSE FEE
MAT LAB	2 Weeks	3	₹ 7,500/-
Hardware Networking	1 Month	3	₹ 5,000/-
.NET	45 Days	3	₹ 7,500/-
Core JAVA/ Advanced JAVA	1 Month	3	₹ 5,000/-
C++	1 Month	3	₹ 3,000/-
Entrepreneurship Skill Development Program	2 Weeks	3	₹ 3,000/-
Internet of Things	2 Weeks	3	₹ 5,000/-
Advance Diploma in Computer Hardware & Networking Management	6 Month	4	₹ 18,000/-

ONE MONTH COURSES START ON 01ST WORKING DAY OF EVERY MONTH

CAREER ORIENTED COURSES OF DIFFERENT LEVELS & DIFFERENT DISCIPLINES

LONG TERM & MEDIUM TERM COURSES

COURSES FOR 10TH PASS OUT

COURSE NAME		DURATION
Diploma in Tool & Die Making	DTDM	4 Years
Diploma in Mechatronics	DIM	3 Years
ITI Machinist	ITIM	2 Years
Condensed Certificate Course in Tool & Die Making	CCCTDM	1 Year
Certificate Course in Basic Machining	CCBM	1 Year

COURSES FOR UNDER MATRIC

Certificate Course in Machine Operation	CCMO	1 Year
Certificate Course in Welding Technology	CCWT	1 Year

COURSES FOR ITI STUDENTS

Certificate Course in Advance Machining	CCAM	1 Year
Certificate Course in Advance Machine Maintenance	CCAMM	1 Year
Certificate Course in CNC Machining	CCCM	1 Year
Certificate Course in Electrical Equipment Repairing & Maintenance	CCERM	6 Months
Certificate Course in Advance Welding Technology	CCAWT	6 Months

COURSE FOR +2 PASS OUT

Certificate Course in CNC Programming & Practice	CCCPP	1 Year
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COURSES FOR DIPLOMA IN MECHANICAL ENGG. OR EQUIVALENT

Post Diploma in Tool Design & Manufacturing	PDTDM	1 Year
Post Diploma in CAD/CAM	PDCC	1 Year
Advance Diploma in CNC Programming Techniques & Practice	ADCNC	6 Months

COURSES FOR DEGREE IN MECHANICAL ENGG. OR EQUIVALENT

Post Graduate in Aerospace Manufacturing	PGAM	1 Year
Post Graduate in Tool Engineering	PGTE	1 Year
Master of CAD / CAM	MCC	6 Months

COURSES FOR DIPLOMA IN ELECTRICAL/ELECTRONICS ENGG. OR EQUIVALENT

Post Diploma / Degree in Automation & Process Control	PDAPC	1 Year
Advanced Diploma in Machine Maintenance & Automation	ADMMA	6 Months
Advanced Diploma/ Degree in VLSI & Embedded System	ADVES	6 Months

COURSES FOR DEGREE IN ELECTRICAL/ELECTRONICS ENGG. OR EQUIVALENT

Post Graduate in Industrial Automation & Robotics	PGIAR	1 Year
Master Certificate Course in Automation & Process Control	MCCAPC	6 Months

COURSES FOR DIPLOMA/DEGREE IN CIVIL ENGG.

Post Diploma/ Degree in Structural Design & Analysis	PDSDA	1 Year
Advance Diploma/ Degree in Structural Design & Analysis	ADSDA	6 Months

COURSES FOR ANY GRADUATE

Certificate Course in Computer Aided Engineering	CCCAE	1 Year
Advance Diploma in Computer Hardware & Networking Management with CCNA		6 Months
Advance Diploma in Computer Hardware & Networking Management	ADCHNM	6 Months
CISCO Certified Network Associate	CCNA	4 Months

MSME TOOL ROOM

(A Govt. of India Society) Ministry of Micro, Small & Medium Enterprises

TRAINING PROGRAMME SCHEDULE 2016-17

DATE	APRIL	2016	DATE	NOVEMBER	2016
05.04.2016	CCAM	59 TH BATCH	01.11.2016	PGTE	15 TH BATCH
06.04.2016	CCAMM	42 ND BATCH	02.11.2016	PGAM	3 RD BATCH
07.04.2016	ADCHNM	104 TH BATCH	04.11.2016	CCCPP - 21 ST /CCCAE	14 TH BATCH
			07.11.2016	ADCHNM	108 TH BATCH
DATE	JULY	2016	08.11.2016	MCC	67 TH BATCH
01.07.2016	DTDM/DIM	26 TH /5 TH BATCH	15.11.2016	ADCNC	66 TH BATCH
05.07.2016	PDTDM	32 TH BATCH	18.11.2016	ADMMA	33 RD BATCH
07.07.2016	MCC	65 TH BATCH	22.11.2016	ADSDA	19 TH BATCH
08.07.2016	MCCAPC	12 TH BATCH			
12.07.2016	PGTE	14 TH BATCH	DATE	DECEMBER	2016
13.07.2016	PDSDA	1 ST BATCH	01.12.2016	PDSDA	2 ND BATCH
14.07.2016	PGAM	2 ND BATCH	02.12.2016	CCCTDM - 21 ST /CCCM	28 TH BATCH
19.07.2016	ADCNC	64 TH BATCH	06.12.2016	CCAM	62 ND BATCH
20.07.2016	ADSDA	17 TH BATCH	07.12.2016	CCAMM	45 TH BATCH
26.07.2016	ADMMA	31 ST BATCH	09.12.2016	PGIAR	5 TH BATCH
			13.12.2016	MCCAPC	14 TH BATCH
DATE	AUGUST	2016	15.12.2016	ADCHNM	109 TH BATCH
01.08.2016	ITI MACHINIST	11 ST BATCH	20.12.2016	PDAMM	2 ND BATCH
02.08.2016	CCCTDM - 20 TH /CCCAE	13 TH BATCH			
03.08.2016	CCAM	60 TH BATCH	DATE	JANUARY	2017
04.08.2016	CCAMM	43 RD BATCH	06.01.2017	PDTDM	34 TH BATCH
08.08.2016	ADCHNM	105 TH BATCH	10.01.2017	ADVES	23 RD BATCH
09.08.2016	CCCPP	20 TH BATCH	11.01.2017	CCMO/CCWT	14 TH BATCH
10.08.2016	ADVES	21 ST BATCH	16.01.2017	ADCHNM	110 TH BATCH
11.08.2016	PDAMM	1 ST BATCH	17.01.2017	ADCNC	67 TH BATCH
16.08.2016	MCC	66 TH BATCH	18.01.2017	ADSDA	20 TH BATCH
17.08.2016	PGIAR	4 TH BATCH	24.01.2017	ADMMA	34 TH BATCH
DATE	SEPTEMBER	2016	DATE	FEBRUARY	2017
01.09.2016	PDTDM - 33 RD /PDCC	28 TH BATCH	02.02.2017	CCCPP	22 ND BATCH
02.09.2016	CCCM	27 TH BATCH	03.02.2017	CCCAE	14 TH BATCH
06.09.2016	MCCAPC	13 TH BATCH	07.02.2017	MCC	68 TH BATCH
08.09.2016	ADCHNM	106 TH BATCH	10.02.2017	PGTE	16 TH BATCH
13.09.2016	ADSDA	18 TH BATCH	14.02.2017	CCAM	63 RD BATCH
14.09.2016	CCMO/CCWT	15 TH BATCH	15.02.2017	CCAMM	46 TH BATCH
15.09.2015	ACCEERM	2 ND BATCH	16.02.2017	ADCHNM	111 TH BATCH
20.09.2016	ADCNC	65 TH BATCH			
23.09.2016	ADMMA	32 ND BATCH	DATE	MARCH	2017
			01.03.2017	PDTDM - 35 TH /PDCC	29 TH BATCH
DATE	OCTOBER	2016	02.03.2017	CCCTDM - 22 ND /CCCM	29 TH BATCH
04.10.2016	CCAM	61 ST BATCH	07.03.2017	MCCAPC	15 TH BATCH
05.10.2016	CCAMM	44 TH BATCH	08.03.2017	CCERM	3 RD BATCH
06.10.2016	ADCHNM	107 TH BATCH	13.03.2017	ADCHNM	112 TH BATCH
18.10.2016	ADVES	22 ND BATCH	14.03.2017	ADMMA	35 TH BATCH
			15.03.2017	ADVES	24 TH BATCH
			21.03.2017	ADCNC	68 TH BATCH
			22.03.2017	ADSDA	21 ST BATCH

Admission Procedure:

Those students attending for Mechanical Short Term Courses can avail free In-Plant Training & do Project Work simultaneously (after or before training hours, as our centre works from **07:00AM to 10:00PM** on all weekdays). **Discount of 10% for group of 10 students.** Limited **Dormitory accommodation** is available for interested participants on payment basis (Per Bed per Month will be **Rs.1200/-**). Registration can be done by paying a DD of Rs.1000/- drawn in favour of “**Central Tool Room & Training Centre**” payable at **Bhubaneswar & the remaining course fee has to be paid by DD at the time of admission.**

For SC/ST candidates no fee will be charged the reservation as per Govt. of India rules, subject to production of two photo copies of self-attested caste certificate. Caste Certificate in original from competent authority is to be produced for verification at the time of admission which may be re-verified from the Issuing Authority.

For Admission Contact : 9438504038/ 9437988052/ 9337118456/ 9861184500

COURSE CONTENT

For Mechanical Engineering or Equivalent :

AutoCAD : Introduction to Auto CAD, industrial application, interface, coordinate system. Introduction to drafting, curve creation, use of functional key, Utilization of Layer, block, W block, attribute edit, text Creation methods. Use of templates, solid creation commands, UCS movement, 3d visualization, photo, realistic rendering & Customization

CATIA : Introduction to CATIA, sketch & constraints. Details of Solid modelling features & rendering etc. Generative Surface Design, Sheet metal design, assembly & kinematics, Design sheet preparation, prismatic surface & lathe machining with post processing, Core cavity extraction & weld design.

CREO : Introduction to CREO, Sketch & constraints. Creating 3d parametric solid & surface modelling. CREO sheet metal designing, creating photo render image of CREO/engineering parts Creo Assembly & Kinematics. CREO-drafting. CREO-manufacturing & Mould design, Creating all graphics & part.

UNIGRAPHICS : Introduction to Unigraphics, sketch & constraint. Details of Part modelling, surfacing & sheet metal design, assembly & mechanism, drafting & detailing, Introduction to UG Manufacturing, planar milling (face milling, pocketing contouring, hole making & text engraving etc.), contour milling (cavity milling, follow core, finish contour operations), lathe machining, Core Cavity extraction for injection & Split Mould.

SOLIDWORKS : Introduction to Solid works, sketch & constraints. Solid Modelling, feature modification using feature manager tree and reference geometry. Introduction to bottom up & top down assembly & kinematics, drafting & detailing, Sheet Metal Design

Master CAM : Introduction to Master CAM, wireframe modelling, surface modelling, tool path generation, post processing & DNC.

ANSYS : Introduction to FEA & ANSYS, Structural Linear & Nonlinear Dynamics (modal, transient dynamic, random vibration, explicit dynamic), thermal (Steady state & Transient), Coupled Field (structural & thermal)

3D PRINTING & SCANNING : Concept & development, classification and advantages, reasons for adopting, limitations, career and application, future of AM/3D Printing, Scan Studio, HD Add-ons, rapid works, STL file conversion.

For Civil Engineering or Equivalent :

AutoCAD : Introduction to Auto CAD, industrial application, interface, coordinate system. Introduction to drafting, curve creation, use of functional key, Utilization of Layer, block, W block, attribute edit, Building Creation, Steel Structure Design, realistic rendering

STAAD PRO : Basic concept of 2D & 3D in Auto CAD, creating the geometry using different methods in X, Y, Z coordinated in STADD- Pro, Defining about beams, column & plates, support & properties system, different steel & load systems, Analysis with concrete & steel, project.

For Electrical / Electronics Engineering or Equivalent

PLC : Instrumentation in process industry , Introduction of SCADA, One line diagram & Wiring guidelines ,PLC Hardware components, Power supply CPU , I/O communication, PLC software timer, Counter file handling SCADA applications, Application of electrical drivers, Pneumatic, Electro Pneumatics

VLSI : Introduction to VLSI, semiconductor physics, Ana log/Digital electronics, EDA tools, CMOS & Layout design using MICROWIND.VHDL & Verilog HDL programming &simulation using XILINX & ALTERA QUARTS, Configuring PLDs (SPARTAN,VIRTEX,CYCLONE),Configuring FPAA using ANADIGM, Basics of Micro controller, project work.

ADVANCED EMBEDDED SYSTEM : Introduction to Embedded system, assembly & embedded 'c' programming ,addressing of 8051,PIC 18 & ARM7 using RIDE,PROTEUS,MPLAB,KEIC & CROSSWARE, hardware interfacing of 8051,plc18 & ARM 7,basics of PCB design & Robotics, project work.

SCADA : Computer based, alarms, data acquisitions, operator interface, non-realtime control, data base & log files, reports and information sharing.

ROBOTIC : Robot component ignition, manipulating the robot, recording the position, writing and running robot programmes, pick and place tasks, working with industrial KUKA robot, industrial automation, drive control.

For Any Graduate :

MAT LAB & SIMULINK : Parallel Computing, Math, Statics & optimization, Control System Design & Analysis, Signal Processing & Communications, Test & Measurement, Code generation & Verification, Application Development, Data base Connectivity & Reporting.

ADVANCE MAT LAB & SIMULINK : Digital Signal Processing, Digital Image Processing, Neural Network, Optimization, Advance Numerical Methodology, Fuzzy Logic & Control Design.

INTERNET OF THINGS : Introduction about IOT, Networking concept, Interfacing with Hardware, MAT LAB & python programming and realtime based IOT project.

HARDWARE & NETWORKING : Computer fundamental & MS DOS, Computer Architecture, Network fundamentals, System Management & Trouble shooting.

.NET : C#. NET & VB.NET.ASP.ADO.NET2.0 Using C#.NET/VB.NET.XML & WEB SERVICES.

CORE JAVA : Object Oriented programming concepts. Input & output in java. Polymorphism. Interface in java. Exception Handling. SWING. Networking in java. Java Database Connectivity.

ADVANCED JAVA : Java Data Base Connectivity. Java server pages (JSP) .JAVA STANDARD TAG LIBRARY (JSTL). JAVA TRANSACTION SERVICE (JTS) /Java transaction API (JTA). JAVA MAIL API. HTML, XML & Java script. Mini-Projects Based on MVC Architecture.

N.B. : For details of Admission Procedure & Course follow our Website.

**Govt. of India, Ministry of Micro Small & Medium Enterprises
B-36, Chandaka Industrial Area, Near Infocity, Bhubaneswar-751024, Odisha, India
Phone : 0674-3011755, 3011733/734, Fax : 0674-2011706, 2743061
E-mail : cttc@cttc.gov.in, Website: www.cttc.gov.in**

