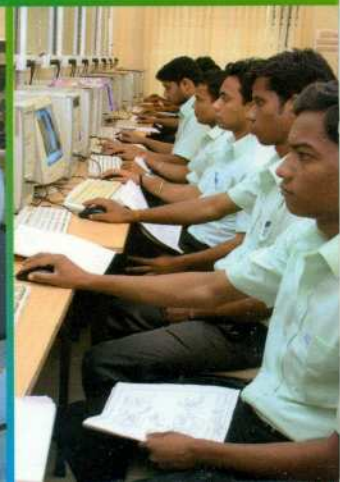
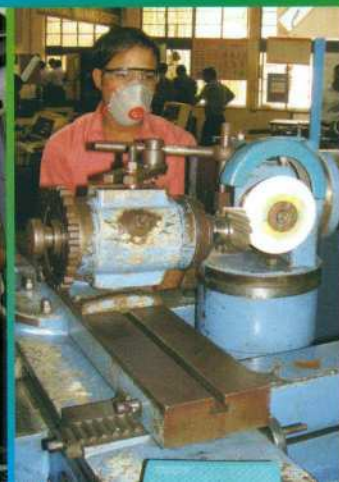


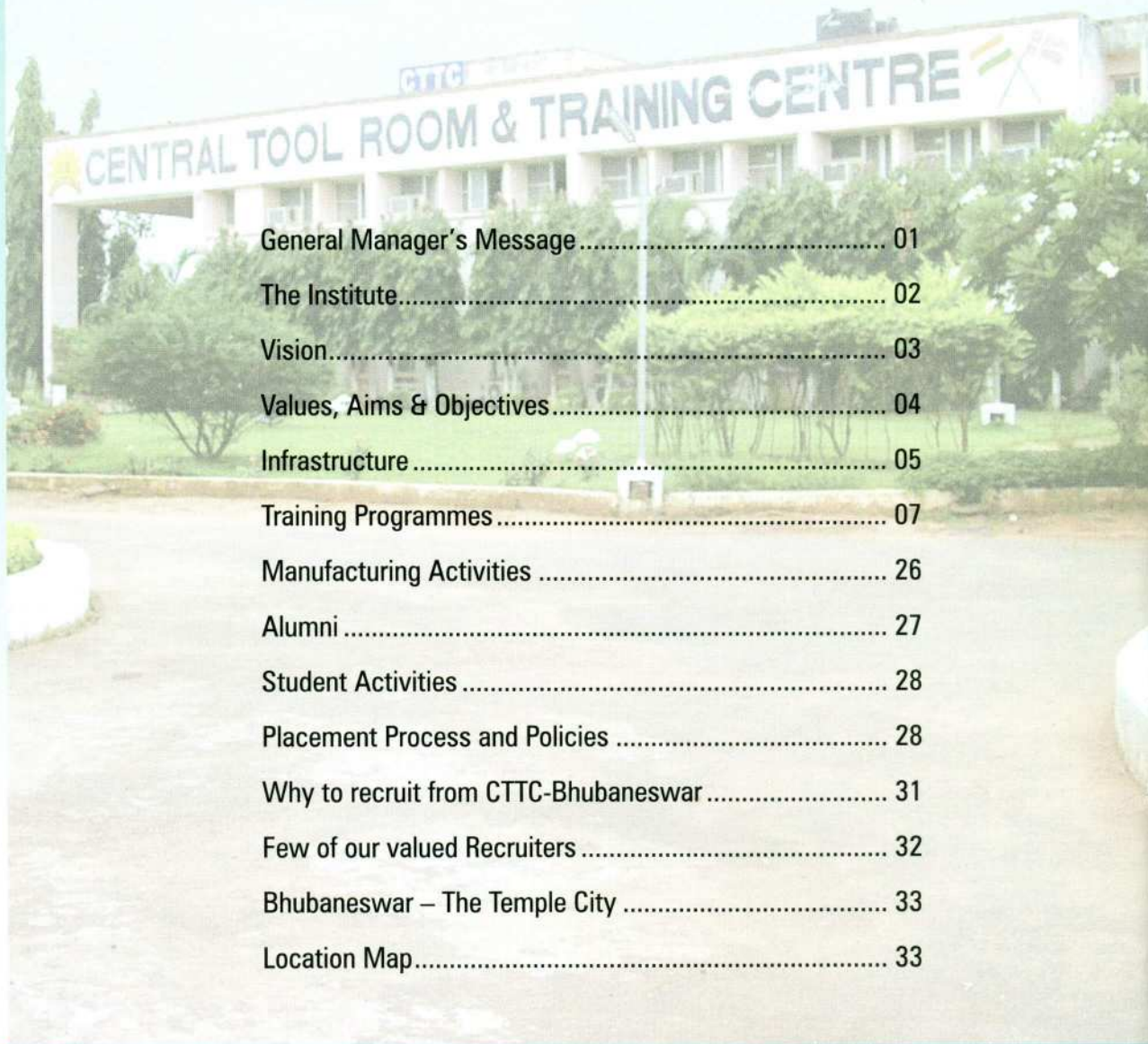


Placement Brochure

Excellence in
Tooling *with Emphasis on*
Training

**CENTRAL TOOL ROOM & TRAINING CENTRE
BHUBANESWAR**





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General Manager's Message



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Greetings from CTTC-Bhubaneswar.....

CTTC (Central Tool Room & Training Centre, Bhubaneswar) has always been the pacesetter among all the MSME Tool Rooms under the Ministry of MSME, Govt. of India. Updated Knowledge and skill are the mainstay amongst the best organizations of today. Keeping this in mind, we at CTTC-Bhubaneswar have designed various programmes that equip the students to face the industry challenges. Over and above a rigorous practical training, we place a great emphasis on all-round development of our students. These talented young professionals have not only proved themselves as valuable assets to their organizations as "CTTC Brand", but also brought laurels to themselves and the institute. The alumni of this Institute occupy key positions in Tool & Die Making, Manufacturing, Designing, Automation, PLC Departments of many industries in India and abroad.

The well-equipped campus provides an excellent environment for technical learning. We at CTTC strive hard to equip our budding technocrats with the required talents, right attitude and mental fortitude to face the challenges of the Indian and Global corporate world.

Since the inception of this great institution, CTTC-Bhubaneswar has the vision to provide quality technical education and to fulfill the mission to develop human potential to its greatest degree.

Looking forward a very long term association, I heartily welcome the esteemed recruiters to visit our campus and test the young talents passing out from this institution.

SIBASISH MAITY
General Manager





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The Institute

MSME Tool Room-Bhubaneswar (Central Tool Room & Training Centre) established in the year 1991, today stands as the premier Tool Room & Training Centre in India. Under the Technical Co-operation programme between Government of India and Govt. of Denmark the centre was established as a Govt. of India Society. The management of affairs of the Centre rests with the Governing Council constituted by Govt. of India. Additional Secretary & Development Commissioner (MSME), Govt. of India, is the President of the Society & Chairman of the Governing Council.

MSME Tool Room-Bhubaneswar is on the way of achieving its set-goal with its extension centre at Rayagada (border of Andhra Pradesh), Odisha. It believes in benchmarking its standards not only against the Tool Rooms & Training Centres in India and the world. The zeal for excellence and commitment of the employees has been pushing the centre to even greater heights of quality industry-oriented training programmes and production of highly precision components.

In pursuit of excellence, the Tool Room has been awarded with ISO 9001:2008, ISO 14001:2004, ISO 29990:2010, AS 9100B, OHSAS 18001:2007 and ISO 29990:2010 certifications.





- ❖ **Multi-fold enhancement of Skill Development activities** through up-gradation of infrastructure facilities, setting up of extension and franchisee centres for outreach programmes.
- ❖ **Fostering growth of MSMEs** by providing Techno-Managerial support services in Engineering and allied fields through Lean Manufacturing, Design clinics, Incubators, ICT-tools etc.
- ❖ **To become internationally acclaimed Centre of excellence** in the area of core competencies providing solutions in product design & development, manufacturing, skill development and project consultancy.
- ❖ **Developing competitive edge** through adoption of best manufacturing practices such as virtual manufacturing, direct digital manufacturing etc.
- ❖ **Adopt e-teaching practices** including latest web-based technologies for outreach skill development activities.
- ❖ **Establish brand image** of MSME-Institutions for skill certification.
- ❖ **Develop value-added finishing courses.** Also make twinning arrangements with reputed institutes and organizations both national/international for such courses.
- ❖ **Focus on guiding trainees;** especially from socially disadvantaged sections of the society for improving employment potential including self-employment.
- ❖ **Organizational restructuring** including continuous HR practices to meet new challenges.
- ❖ **Total self-sufficiency with sustained growth.**





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Our Values

- ❖ **Integrity and Honesty:** CTTC-Bhubaneswar believes in being truthful to self and others in all its activities.
- ❖ **Respect for individuals:** CTTC-Bhubaneswar believes that each individual is unique and capable of contributing to the institutional growth.
- ❖ **Transparency:** CTTC-Bhubaneswar believes in sharing of relevant information to encourage all its stakeholders for their participation and empowerment.
- ❖ **Commitment:** CTTC-Bhubaneswar family members take pride in identifying themselves with the centre and its activities.
- ❖ **Quality:** CTTC-Bhubaneswar believes in meeting the standards required to make its products unique and attractive.
- ❖ **Passion for Performance:** CTTC-Bhubaneswar family believes in exploring new avenues to achieve goals beyond expectation.
- ❖ **Social and Ethical Sensitivity:** CTTC-Bhubaneswar believes in serving the Society.

Aims & Objectives

- ❖ **To develop production facilities** of moulds, jigs, fixtures, gauges & other sophisticated tools preferable for Micro, Small & Medium Enterprises.
- ❖ **To train manpower** in the fields of Tool & Die Making, CAD/CAM, Tool/Product Designing, CNC Programming & Practices, Machine Maintenance, PLC, VLSI, Industrial Automation and other allied engineering trades both for the freshers & for personnel already engaged in the field.
- ❖ **To provide common facilities** in precision machining & heat treatment.
- ❖ **To provide consultancy facilities** primarily for Micro, Small & Medium Enterprises in the field of tool engineering, quality improvement and productivity.



Infrastructure

- ❖ Sprawling area: 13 acres
- ❖ Training Centre with more than 20 CNC Machines
- ❖ More than 1700 Computers loaded with latest CAD/CAM softwares viz. AutoCAD, Pro-E, CATIA, UG, ANSYS, Solidworks, FEA, Mastercam, Hypermesh etc.
- ❖ FESTO Hydraulic and Pneumatic kits
- ❖ Siemens PLC systems
- ❖ VLSI & Embedded Systems
- ❖ CISCO Certified Network Associates
- ❖ Modern Tool Room with latest machines & equipments
- ❖ Separate Inspection Department with latest measuring instruments and CMM
- ❖ Full-fledged Library with Study Centre
- ❖ Video Conference facility
- ❖ Vacuum Heat Treatment Plant
- ❖ 10000 Class Clean Room

Machineries & Equipments

Sl.No.	Name of the machines & equipments	Make	Qty
1	CNC Lathe	Mazak, Schaublin, ACE Designer	20
2	CNC Turn Mill Centre	DMG	01
3	Centre Lathe	Schaublin	01
4	Lathe (Conventional)	HMT, Schaublin, Kirloskar, Vikram, Jyoti, Gedee & Padmini	38
5	CNC Milling	MIKRON, BFW, ACE Designer, Bridgeport	18
6	Milling (Conventional)	Pedersen & HMT	33
7	Pentograph Milling Machine	Tool craft	01
8	CNC Jig Grinder	Moore	01
9	Surface Grinder	Jakobsen & Bhurjee	21
10	Cylindrical Grinder	Studer & HMT	05





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11	Tool & Cutter Grinder	Pedersen	07
12	Single Lip Cutter Grinder		02
13	Pedestal Grinder	KEF	04
14	Lapwet Grinding Machine	HMT	01
15	Tool Grinder	Junger	01
16	CNC Wire EDM	AGIE & Electronica	04
17	CNC Die Sinking (EDM)	AGIE & Electra	04
18	Pedestal Drilling Machine	EFCO	04
19	Bench Drilling Machine	EFCO	04
20	Radial Drilling Machine	HMT	02
21	Injection Moulding	L&T	01
22	Hydraulic Power Press	BSV & Soundergard	03
23	Hand Press Machine	DALIP	02
24	Power Press	AMTEEP & Hydraulic	02
25	Filing Machine	SENAZ	01
26	Shaper	MMM Loyal	01
27	Power Hacksaw	Chudasma	04
28	Supercut (Bandsaw)	J.S. Machine Tools	01
29	Bench Vice	APEX	61
30	Vacuum Heat Treatment	ALD	02
31	CNC 3D CMM	Seiss, Accurate & LK	03
32	CAD/CAM Equipments	COMPAQ, HCL etc.	1700
33	MIG/MAG Welding M/c	ESAB	01
34	TIG Welding M/c	ESAB	01
35	PUG Cutting M/c	ESAB	01
36	OxyAcetiline M/c	ESAB	01
37	Microcontroller Trainer Kit		10
38	VLSI Trainer Kit		20
39	Hydraulic Trainer Kit		01
40	S7-200, 300 & 400		18
41	PLC	Allen Bradley	10
42	Vector Control Drive		01
43	PCB Manufacturing Equipment		1 set



1. Post Graduation in Tool Engineering

Duration: 1 year (2 Semesters)

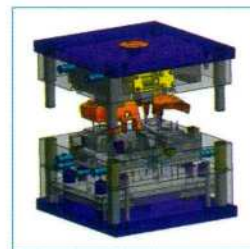
Eligibility: Degree in Mechanical/Automobile/Production Engineering or equivalent.

Annual Intake: 120

Suitable for: Tool/Product Designing (Using latest CAD/CAM softwares), Development and Manufacturing. Supervising job of Tool Room/Workshop.

Brief Course contents:

- ❖ Computer Fundamentals & MS Windows
- ❖ AutoCAD
- ❖ CNC Part programming
- ❖ Master CAM
- ❖ Uni-graphics (Part Modeling, Assembly, Generative Drafting & Detailing, Motion simulation & Manufacturing)
- ❖ Pro-Engineer (Sketcher, Part modeling, Assembly Constraints, Kinematics, Drafting & Detailing, Core-Cavity Extraction, Sheet Metal etc.)
- ❖ CATIA (Sketch Tools, Part Modeling, Assembly of parts, Generative & interactive Drafting, DMU Kinematics, Surface Modeling, Sheet Metal Design, Core-Cavity Extraction)
- ❖ Press Tool Theory
- ❖ Project on Press Tool Design
- ❖ Mould Theory
- ❖ Project on Mould Design
- ❖ Project on Press Tool Manufacturing
- ❖ Project on Mould Manufacturing
- ❖ Tool Engineering





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Training Programmes

2. Post Diploma/Graduation in CAD/CAM

Duration: 1 year

Eligibility: Diploma/Degree in Mechanical/Production/Tool/Mould Making/
Plastic/ Automobile Engineering.

Annual Intake: 60

Suitable for: Tool/Component Designing, Product Development,
Tool/Die/Mould Manufacturing.

Brief Course contents:

- ❖ Computer fundamentals & MS Windows
- ❖ Computer Aided Design (AutoCAD)
- ❖ Solid Works (Part Modeling, Assembly, Surface Modeling, Detailing & Drafting Import-Export Diagnosis)
- ❖ Computer Aided Manufacturing (Manual Part Programming, CNC Milling, CNC Turning)
- ❖ DELCAM (Sketch Editing Surface, Power Mill, Tool Path Generation)
- ❖ PRO-Engineers (Part Modeling, Detailing & Drawing, Part & Assembly, Sheet Metal, File Converters, N.C. Machining, PRO E Manufacturing)
- ❖ Unigraphics (Introduction to Sketch, Wire frame & Surfacing, Part Modeling, Assembly, Manufacturing)
- ❖ Catia (Surface Modeling, Drafting, Detailing, Assembly, Stress Analysis)
- ❖ Finite Element Analysis (Solution of Boundary, ISO Parametric Elements, Meshing, Trusses, General Solids, Numerical Integration & Stability)
- ❖ Reverse Engineering Concepts
- ❖ Networking Concepts
- ❖ Project Work (Designing of Mechanical Assemble, Documenting the Design by extracting the parts, Generating Bill of Material, Process Planning and Developing CNC Part Programmes, Machining the Parts using DNC Links)
- ❖ Tool Design (Press Tool Design or Plastic Mould)



3. Post Diploma/Graduation in Tool Designing & Manufacturing

Duration: 1 year

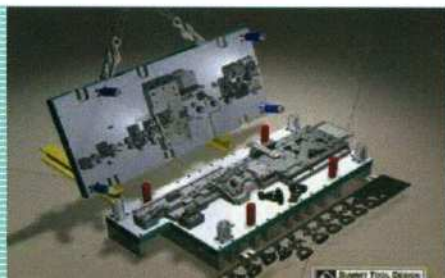
Eligibility: Diploma/Degree in Mechanical/Production/Automobile/Tool & Die/Mould Making Engineering.

Annual Intake: 300

Suitable for: Tool/Component Designing, Product Development, CNC Programming and Machining.

Brief Course contents:

- ❖ AutoCAD
- ❖ CNC Part programming (Lathe & Milling Machines - Fanuc , Haiden-hain and Siemens etc.)
- ❖ Master CAM
- ❖ Unigraphics (Part Modeling & Manufacturing)
- ❖ Pro-Engineer (Sketcher, Part modeling, Assembly Constraints, Kinematics, Drafting & Detailing, Core-Cavity Extraction, Sheet Metal etc.)
- ❖ CATIA (Sketch Tools, Part Modeling, Assembly of parts, Generative & Interactive Drafting, DMU Kinematics, Surface Modeling, Sheet Metal Design and Core Cavity Extraction
- ❖ Press Tool Theory
- ❖ Project on Press Tool Design
- ❖ Mould Theory.
- ❖ Project on Mould Design.
- ❖ Project on Press Tool Manufacturing : Progressive Press Tool
- ❖ Project on Mould Manufacturing : Hand Mould & Single / Multi Cavity Injection Mould.





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Training Programmes

4. Certificate Course in Master of CAD/CAM

- Duration:** 6 months
- Eligibility:** Degree in Mechanical/Production/Automobile/Tool & Die/Mould Making
- Annual Intake:** 300
- Suitable for:** Tool/Component Designing, Product Development, Production Planning & Control, Supervising to Diploma and ITI holders.

Brief Course contents:

- ❖ AutoCAD
- ❖ NC & CNC Programming (CNC Turning & Milling - Heiden-hain, FANUC & Sinumeric).
- ❖ Machining on CNC (Turning and Milling)
- ❖ Pro-Engineer (Pro/Sheet metal design, Pro/photo renders, Pro-detailing, Pro-manufacturing and Pro-Web Publish)
- ❖ CATIA (Sketcher, Solid Modeling, Wire Frame & Surface Molding, Assembly, DMU Kinematics, Generative Drafting, Sheet Metal Design, NC Manufacturing and Core & Cavity)
- ❖ UNIGRAPHICS (Part Modeling, Assembly, Drafting and Manufacturing)
- ❖ Finite Element Analysis (General Analysis procedure, Analysis of beams, Creating Models and Export & import procedure etc.)
- ❖ Hypermesh
- ❖ Mould Design
- ❖ Engineering Drawing
- ❖ Metrology
- ❖ Machine Tooling



5. Master Certificate Course in Automation & Process Control

Duration: 6 months

Eligibility: Degree in Electrical/Electronics & Instrumentation Engineering.

Annual Intake: 120

Suitable for: Industrial Automation, Process Control engineering, VLSI, Hydraulic & Pneumatic Engineering.

Brief Course contents:

- ❖ Drive Control and Applications (Advance Electricity and industrial devices, wiring and implementation, AC & DC machines routine test, Sensoring and transducers technology)
- ❖ PLC (Advance PLC and interfacing with block applications, LAD, FBD and STL Programming basics, FB, FC, DB block programmes)
- ❖ SCADA (Application of TAG-Management, graphics designer, editor, alarm logging and online trend control documentation)
- ❖ VLSI & Embedded Systems (Logic designing and testing using HDL and PLD, Interfacing & testing using 8051 and PIC micro controller, ARM7 interfacing and designing)
- ❖ Hydraulics & Pneumatics (Pneumatic/Hydraulic circuits, implementation and interfacing with PLC and automation control)
- ❖ Process Control Systems (DCS programming and application, PID/APID/PD/PI/P-Application, 20Sim use & Programming, AutoCAD electrical drawing applications)
- ❖ Project work



6. Advance Diploma in CNC Programming Techniques & Practices

Duration: 6 months

Eligibility: Diploma in Mechanical / Production / Automobile / Tool & Die / Mould Making Engineering.

Annual Intake: 400

Suitable for: CNC Programming & Operation, Application Engineer, CNC Supervising, Quality Assurance etc.

Brief Course contents:

- ❖ Introduction to Metal Cutting Technology
- ❖ AutoCAD
- ❖ NC & CNC Programming (Programming Concepts, Manual Part Programming, Machining on CNC-Turning and CNC-Milling FANUC, Heiden-hain & Sinumeric)
- ❖ Master CAM (Modifying Geometry, 2D and 3D Tool Path, Solid Modeling, Surface Modeling, 3D Tool Paths)
- ❖ Metrology & Advance measurement Technique
- ❖ Unigraphics (Sketch, Primitives, Transform feature Ballons, Curves, Surface Determines, Parametric & Non Parametric, Assembly and Drafting.
- ❖ Project Work



7. Advance Diploma in Machine Maintenance & Automation

Duration: 6 months

Eligibility: Diploma/Degree in Electrical or Equivalent.

Annual Intake: 300

Suitable for: Maintenance/Automation Engineer, Supervising the Maintenance technicians.

Brief Course contents:

- ❖ Machine Operation (Conventional Lathe, Milling, Surface/Cylindrical/Tool & Cutter Grinding, CNC Milling & CNC Lathe)
- ❖ Basic Electronics and Electrical Control with Electric Drives.
- ❖ Preventive and Breakdown Machine Maintenance (Conventional & CNC Lathe and Milling machines)
- ❖ Preventive and Breakdown Machine Maintenance (Grinding and Other Machines) in respect of Electrical, Mechanical and Hydraulic issues.
- ❖ AUTOMATION (Computer Fundamentals, ECAD Programming and PLC Programming).
- ❖ SCADA Operation



8. Advance Diploma in VLSI & Embedded System

Duration: 6 months

Eligibility: Diploma/Degree in Electronics & Telecommunication, Electrical & Electronics, Electronics and Instrumentation & equivalent.

Annual Intake: 200

Suitable for: Very Large Scale Integration (VLSI) Engineer, Embedded System Engineer, Maintenance Engineers.

Brief Course contents:

- ❖ VLSI (Semiconductor physics, Analog/Digital Electronics, EDA Tools, DSCH, CMOS, Layout Design, VHDL, XILINX, Simulation, Model Sim, Altera, Verilog, Schematic design, PLD-FPGA and CPLD, ISP and Project work.
- ❖ Embedded System (8051Micro controller, Assembly Language & Embedded C for 8051, PIC Microcontroller, Assembly Language, Interfacing of PIC Motor controller, Assembly language, PIC peripherals, ARM-7, Interfacing of Arm, RTOs, Robotics, PCB Design and Project work.



EMBEDDED SYSTEM

9. Advance Diploma in Structural Design and Analysis (CAD/CAE)

Duration: 6 months

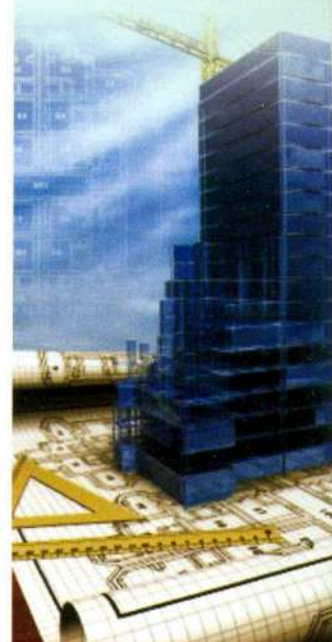
Eligibility: Diploma/Degree in Civil Engineering

Annual Intake: 120

Suitable for: Civil/Structural/Architectural designing, analysis etc.

Brief Course contents:

- ❖ AutoCAD
- ❖ 3D Max (File, Create, Tools, Groups, Modifier, Animation, Rendering, Lighting, Material Standard/Extensive Primitives, Compound Objects, Doors, Windows, AEC Extended, Stairs, V-ray)
- ❖ Microsoft Office
- ❖ Stadd Pro (File New Creating, Input Geometry, Input properties, Inspection, Constant Supports, Input loading system, Design create, Steel, Specify Analysis type, Viewing results using output file)
- ❖ Adobe Photoshop-CS3 (File, Edit, Image, Layer, Select, Filter, Ansys, View, Window, Colouring of Building, Setting of 3D Building models)
- ❖ Revit (File, Edit, Modeling, Drafting, Site, Tools, Setting, Project Family 3D Building, Modify 3D Building, Color Fill Setting, Costing, Automatic Door, Window, Furniture etc.)
- ❖ Printing and Plotting.



10. Advance Diploma in Computer Hardware & Network Management with CCNA

Duration: 12 weeks (4 hrs/day)

Eligibility: B.Sc/Diploma/Degree Engineers

Annual Intake: 300

Suitable for: Maintenance of PCs in respect of Hardware and Networking management with CCNA.

Brief Course contents:

- ❖ Introduction to Operating system
- ❖ Computer Peripherals
- ❖ Memory and storage
- ❖ Assembly and trouble shooting
- ❖ Introduction to Networking

11. Advance Diploma in Computer Hardware & Networking Management

Duration: 6 months

Eligibility: ITI/10+2/Diploma/Degree/Computer Science Engineers

Annual Intake: 400

Suitable for: Maintenance of PCs in respect of Hardware and Networking

Brief Course contents:

- ❖ Software applications (MS word, Excel, Powerpoint, Notepad)
- ❖ Installation, Configuration, Admin, Management and Maintenance)
- ❖ Windows XP Professionals
- ❖ Network Infrastructure
- ❖ Microsoft Exchange Server

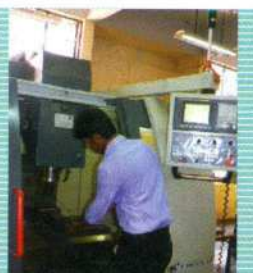
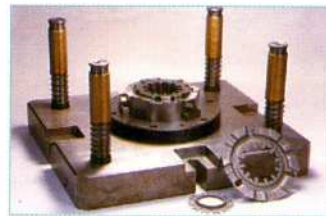


12. Diploma in Tool & Die Making (Approved by AICTE and SCTEVT)

- Duration:** 4 years
- Eligibility:** HSC/SSC (Minimum 50% marks for General and 40% for SC/ST candidates)
- Selection Procedure:** All India basis Entrance Test
- Annual Intake:** 60
- Suitable for:** Tool/Mould/Dies/Jigs & Fixture Designing & Manufacturing, Product Development, PPC, CNC Machining, Supervising etc. Very much suitable for any modern Tool Room.
- In-plant Training:** During the 4th year the candidates are deputed for inplant/industrial training for one year. Recruitment Process takes place during 3rd year i.e. March & April every year for inplant training.

Brief Course contents:

- ❖ Production Technology
- ❖ Engineering Mathematics
- ❖ Engineering Drawing
- ❖ Material Technology
- ❖ Engineering Metrology
- ❖ Electrical & Electronics
- ❖ Press Tool/Mould Design & manufacturing
- ❖ Jigs & Fixture
- ❖ Hydraulics & Pneumatics
- ❖ CNC & Conventional machining
- ❖ Strength of Material
- ❖ Heat Engine
- ❖ Design/modeling tools (AutoCAD, Pro-E, CATIA),
- ❖ MasterCAM





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Training Programmes

13. Diploma in Mechatronics (Approved by AICTE and SCTEVT)

- Duration:** 3 years
- Eligibility:** HSC/SSC (Minimum 50% marks for General and 40% for SC/ST candidates)
- Selection Procedure:** All India basis Entrance Test
- Annual Intake:** 60
- Suitable for:** Mechanical & Electronics engineering job

Brief Course contents:

- ❖ Mathematics
- ❖ Applied Science (Physics and Chemistry)
- ❖ Engineering Measurement, Drawing and Mechanics
- ❖ Fundamentals of Electricals and Electronics
- ❖ Mechanical Drafting and Workshop
- ❖ Non-conventional Energy Sources
- ❖ Manufacturing Engineering and it Practice
- ❖ Programming in C++
- ❖ Digital Electronics, Strength of Materials
- ❖ Material Science
- ❖ Industrial Organization & Management
- ❖ Metrology & Instrumentation
- ❖ Theory of Machines, Measurement Practice
- ❖ Control Devices and its practice
- ❖ Hydraulics & Pneumatics
- ❖ Machine Design Practice and Machine Tools Technology
- ❖ Machine Tool Practices
- ❖ Programmable Logic Controller Practice
- ❖ Micro controllers, Robotics
- ❖ Computer Aided Graphics
- ❖ CNC Programming
- ❖ Digital Signal Processing & its practice



14. Certificate Course in Advance Machine Maintenance

Duration: 1 year

Eligibility: ITI (Electrical/Electronics or equivalent)

Annual Intake: 90

Suitable for: Operation & Maintenance of different Electrical, Mechanical, Electronics, Hydraulics, Pneumatic machines & equipments being used in different industries. Besides they can also be able to do the domestic electrical wiring/repairing etc.

Brief Course contents:

- ❖ Lathe/Milling/Grinding Machine Operation
- ❖ Fitting Works
- ❖ Preventive & Break Down Maintenance of both CNC and Conventional Lathe/Milling/Grinding/Drilling Machine (Mechanical, Electrical, Hydraulics & Pneumatics)
- ❖ PLC Operation
- ❖ Maintenance of Compressor, DG Set, UPS, Pumps
- ❖ Computer Fundamental
- ❖ AutoCAD





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Training Programmes

15. Certificate Course in Advance Machining

Duration: 1 year (2 semesters)

Eligibility: ITI (Fitters)

Annual Intake: 300

Suitable for: CNC/Conventional/Special Purpose Machine Operation, CNC Programming, Operation of AutoCAD etc.

Brief Course contents:

❖ **1st Semester (Theory & Practical Training in the Training Department)**

Computer Fundamentals, Drawing Studies, AutoCAD, Conventional Turning/Milling/Grinding, EDM/W.EDM, Fitting/Bench work, CNC Part Programming (Milling & Turning), Inspection & Metrology, Practice on Training machines

❖ **2nd Semester (Practical Training in commercial Production Department)**

Fitting/Assembly, CNC Milling & Turning, Heat Treatment and Inspection/QC

16. Certificate course in CNC Machining

Duration: 1 year (2 semesters)

Eligibility: ITI passed outs in Machinists, Turner, COE etc. trades.

Annual Intake: 60

Suitable for: Programming and Operation of CNC Machines.

Brief Course contents:

❖ **1st Semester**

Computer Fundamentals, Drawing Studies, AutoCAD, Conventional Turning/Milling/Grinding, EDM/W.EDM, Bench Work/Assembly, Inspection & Metrology, CNC Tutorial, CNC Machining).

❖ **2nd Semester**

1. CNC Milling/Turning Programming & Operation
2. Direct manpower to the Commercial Production Centre in its CNC Machining area.





17. Certificate Course in CNC Programming Techniques & Practices

Duration: 1 year

Eligibility: 10+2/ITI (Fitter)

Annual Intake: 180

Suitable for: Operation of Conventional Milling/Turning/Grinding and CNC Programming and Operation.

Brief Course contents:

❖ 1st Semester

Theory:

Workshop Technology, Engineering Drawing, Material Technology, Engineering Metrology, English Communication and CNC Technology.

Practical:

Basic Bench Work & Fitting, Turning/Milling/Grinding Exercises and Auto CAD

❖ 2nd Semester

Practice:

Basic Bench Work & Fitting, Turning/Milling Exercises, CNC Part Programming, CNC Turning/Milling/EDM Practice, On Job Training.





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Training Programmes

18. ITI (Machinist) (NCVT Approved)

Duration: 1 year

Eligibility: 10th/HSC

Annual Intake: 24

Suitable for: CNC & Conventional machine operation.

Brief Course contents:

- ❖ As per NCVT, New Delhi
Workshop Calculation & Science.
Engineering Drawing
Pressing, Shaping, Turning, Milling & Grinding
CNC Programming & Operation

19. Certificate Course in Computer Aided Engineering

Duration: 1 year

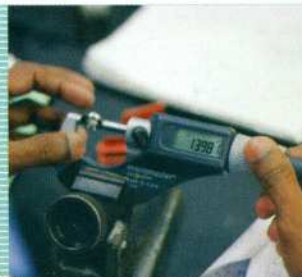
Eligibility: 10+2 passed outs

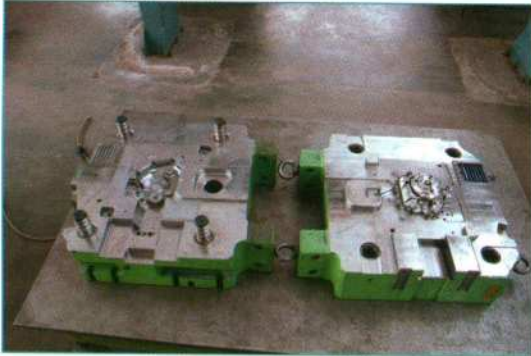
Annual Intake: 50

Suitable for: Quality Control/Inspection/Stores/PPC Departments.

Brief Course contents:

- ❖ Conventional Machining (Milling, Turning, Grinding)
- ❖ Drawing studies
- ❖ AutoCAD
- ❖ Inspection & Quality Control
- ❖ Inventory Management
- ❖ CNC Part Programming
- ❖ Process Planning





20. Condensed Certificate Course in Tool & Die Making

Duration: 1 year

Eligibility: 10+2/ITI (Fitter)

Annual Intake: 180

Suitable for: Operation of Conventional Milling/Turning/Grinding and CNC Programming and Operation and all the Tool Room machines.

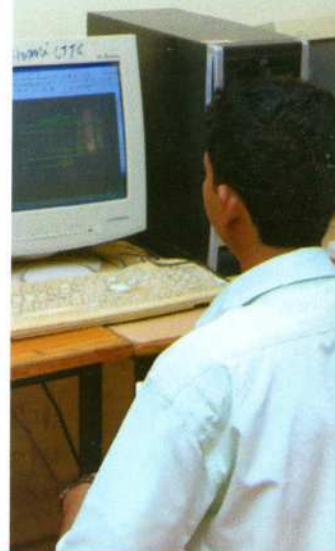
Brief Course contents:

❖ **Theory:**

Production and Material Technology, Engineering Drawing & Engineering Metrology, CNC Technology, Press Tool Theory and Press Tool Design, Industrial Management, Jigs & Fixture theory, Mould Theory and Mould Design, Modern Manufacturing Technology and Heat Treatment.

❖ **Practical:**

Basic Bench Work & Fitting, Turning/Milling/Grinding/EDM Exercises, CNC Milling/Turning Part Programming, Auto CAD, Basic Press Tools, Jigs and Fixtures, Basic Moulds for Plastic Moulds and advanced Tooling





AS 9100, ISO 9001, 14001 &
OHSAS 18001 Certified

Training Programmes

21. Certificate Course in Welding Technology

Duration: 1 year

Eligibility: HSC Passed outs

Annual Intake: 50

Suitable for: Welding and fabrication

Brief Course contents:

- A. Basic Fitting
- B. Basic Welding or Manual Metal Arc Welding
- C. Advance Welding
 - Metal Active Gas Welding (Mag) or CO2 Welding
 - Metal Inert Gas Welding (MIG)
 - Tungsten Metal Arc Welding (GTAW)
 - Metal Inert Gas Welding (TIG)
 - Sub-merged arc Welding (SAW)
 - Basic Machine Operation



22. Certificate Course in Machine Operation

Duration: 1 year

Eligibility: HSC/SSC Passed/failed

Annual Intake: 50

Suitable for: Operation of Conventional Milling/Turning/Grinding machines

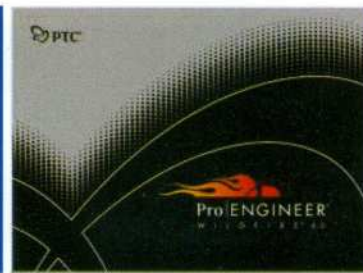
Brief Course contents:

- ❖ Operation of Conventional Milling/Turning/Grinding
- ❖ Fitting/Bench Work
- ❖ Drawing Studies
- ❖ Inspection/Metrology
- ❖ Workshop Calculation



Short Term Training Programmes

Auto CAD	One month	3hrs/day
Stad Pro	One month	3hrs/day
Master CAM	One month	3hrs/day
Unigraphics	One month	3hrs/day
Pro-E	One month	3hrs/day
CATIA	One month	3hrs/day
Advanced Embedded System	One month	3hrs/day
Hardware & Networking	One month	3hrs/day
Hydraulic & Pneumatic	One month	3hrs/day
20 SIM	Two weeks	3hrs/day
MAT LAB	Two weeks	3hrs/day
Hypermesh	Two weeks	3hrs/day
Ansys	Two weeks	3hrs/day



Tailor Made Training Programmes

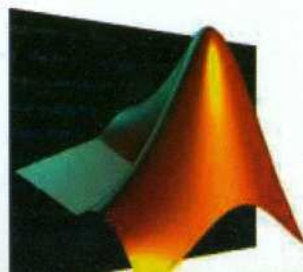
Programmes for Foreign Nationals

Programmes for faculties of Technical Institutions

Programmes for Industry professionals

Induction trainings for newly recruitees of Corporate houses

Modular training programmes for Corporates



MATLAB
The Language of Technical Computing
The MATH WORKS Inc.



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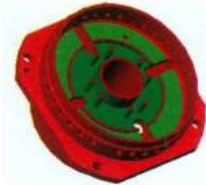
CTTC, Bhubaneswar

Manufacturing Activities

Central Tool Room & Training Centre, Bhubaneswar is enriched with its production infrastructure and capabilities.

CTTC Manufactures:

1. Plastic Moulds, Press Tools, Jigs & Fixtures, Gauges, Extrusion Dies, Die Casting Dies etc.
2. Highly precision components in general and aero-space components in particular.
3. Inspection facilities with the help of CMM, Project Profile, Tally round, Micro-height etc.
4. Heat Treatment facilities using Vacuum Heat treatment plant of ALD, German make.
5. Clean Room of 10000 Class for Assembly of aero-space components.
6. Our trainees work as direct man-power to the Production Department so that they gain confidence to face the industry-challenges.



Few of our valued customers

- Aeronautical Development Agency
- Indian Space Research Organization
- Hindustan Aeronautics Ltd.
- TATA Motors Ltd.
- Bharat Heavy Plate & Vessels Ltd.



Our Alumni

CTTC, Bhubaneswar believes its alumni members are the real ambassadors of this institute. The institute is proud of its alumni who carry its culture, dedication and spirit in various walks of life. Through their talent, experience and specialized training some of them have come to occupy leadership positions in the corporate world.

Today they are spread throughout the world contributing as professional managers, entrepreneurs, researchers and other specialists.

The Placement Cell of CTTC, Bhubaneswar acts as the nodal agency for maintaining liaison with its alumni all over the world and to involve them in different social development activities. Every year in the month of November the alumni members assemble in different places and plan to shape their future activities. On the eve they also publish a souvenir every year.



Student Activities

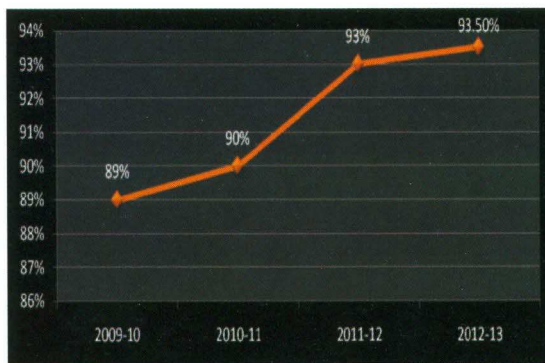
CTTC encourages diverse and vibrant student activities which is an integral part of students' life. Those activities provide stimulating avenues to help the students to shape their life. Co-curricular activities viz. Seminars, Quizzes, Sports etc. are being conducted regularly.

The students also participate in different tech-fests and even International Skill Olympiads.

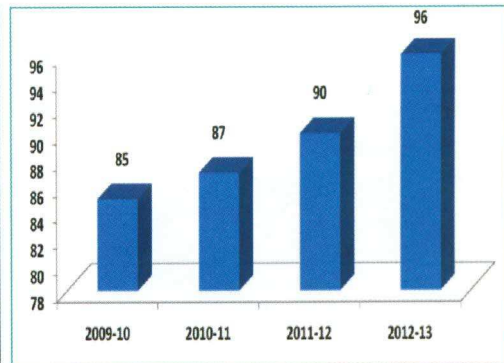


Placement Process and Policies

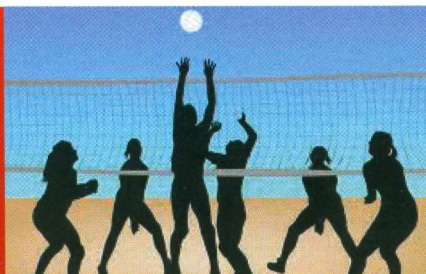
Placement is an important activity of CTTC-Bhubaneswar. Though CTTC-Bhubaneswar does not give any job guarantee still majority of the students join CTTC with a hope to be placed in a suitable organization. The last four years placement record is quite encouraging. Approximately 8 companies in a month visit CTTC for conducting Campus interviews. The last five years Companies' visit record is as under:



Placement Achievement



No. of Companies Visited



CTTC believes practice makes somebody really perfect. Hence all the courses are designed in such a way that the students can get 80% practical/on-hand experience and 20% theory. Though CTTC tries its best to impart maximum on-hand experience in its Training and Production Departments, still it passes the message to the students that industries are the real learning places for them. Hence, throughout the training process CTTC tries to shape the students best suitable to an industry.

Placement Office

To best utilize the expertise and knowledge of the students, CTTC-Bhubaneswar has formed a Placement Cell which consists of HOD of the Training Department, HOD of the Production Department, Senior most Faculty of Non-Mechanical Stream, Senior Most instructor of Training Workshop and a Placement Coordinator.



Placement Facilities

CTTC Placement Department always tries to give the best comfort to the Recruiters so that the recruiters will be able to churn out the most suitable candidates for their organizations. CTTC provides:

- All local logistic/transport facilities
- Well equipped auditorium for pre-placement discussion with the students
- Comfortable Recruitment Room facilitating with Tele/Video conference system.
- Well designed Conference Hall for Group discussions.
- Dedicated CNC / Conventional Machines for practical test
- Exclusive CAD/CAM Labs for Model Tests
- Special classes/practices on machines/software to the candidates selected by different companies prior to their joining.

Placement Process:

1. The companies aspire to get really-skilled man-power from CTTC-Bhubaneswar can simply send a mail to placement@cttc.gov.in, cttcplacement@satyam.net.in or skrout@cttc.gov.in stating the following:





AS 9100, ISO 9001, 14001 &
OHSAS 18001 Certified

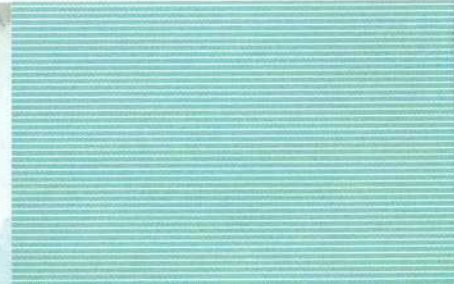
CTTC, Bhubaneswar

- a. Details of the company viz. Name, Location of the Corporate Office and Plants, Facilities, Products, Major customers etc.
 - b. Skill set of the candidates
 - c. No. of vacancies
 - d. Range of the stipend/salary/remuneration
 - e. Other facilities viz. PF, ESI, Accommodation, Transportation etc.
 - f. Process of selection, Tentative Schedule of conducting interview and joining of the selected candidates
2. Pre-placement Talks/Corporate Presentations: This is the forum where the Recruiters inform the students about company's business, work culture, organization structure, career/ growth opportunities and specific terms & conditions. CTTC recommends a 30 minutes presentation and 15 minutes Question & Answer Session.
 3. After the pre-placement Talk, the students convinced by the companies presentation give their option to attend the Selection process.
 4. Selection process may contain Written Test, Practical Test, Model Test, Group Discussion, Personal Interview as per discretion of the recruiters.



Placement Policies:

- CTTC Placement Cell works only for the registered candidates who undergo courses having duration of minimum 6 months.
- Provides one job for one candidate
- The students can be allowed to attend Campus interviews once they complete 50% of the course duration.
- CTTC does not charge any fee to the Recruiters
- Retention of joined candidates is the responsibility of the respective organizations.



Why to recruit from CTTC-Bhubaneswar

- Considered as the best Tool Room & Training Centre in the Ministry of MSME, Govt. of India for last one decade.
- The Centre has acquired international-acclaimed certificates viz. ISO 9001:2008, 14001:2004, OHSAS 18001:2007, AS 9100 B and ISO 29990:2010.
- CTTC believes Practice makes perfect; 80% practice and 20% theory
- Modern Tool Room & Production facilities are available under the same roof.
- The students get commercial-production exposure
- Workshops on Communication Skill, Personality Development, Mock-interviews etc. are parts of each training programmes.
- Continuous updation of Course contents according to the industry requirement.
- Special classes/machining/Designing practices for the candidates selected for companies.
- Regular Industry-Institution interactions.





AS 9100, ISO 9001, 14001 & OHSAS 18001 Certified

CTTC, Bhubaneswar

Few of our Valued Recruiters



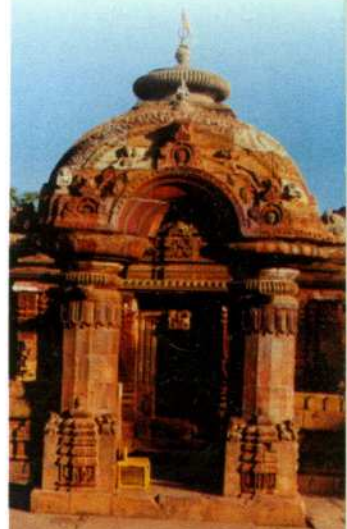
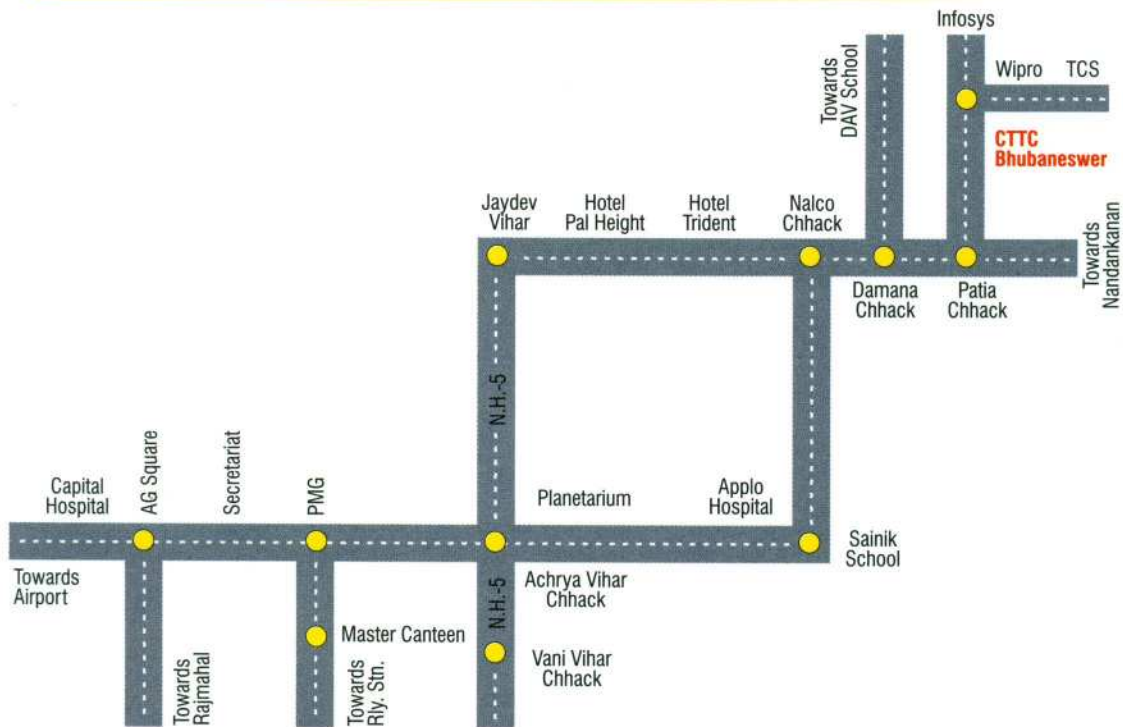
ASB ASB INTERNATIONAL PVT. LTD.

Subsidiary of NISSEI ASB MACHINE CO., LTD., Japan

Bhubaneswar - The Temple City

Capital city of modern state of Odisha and the ancient kingdom of Kalinga, Bhubaneswar is known as the Temple City of India. The city is a fast growing, highly cosmopolitan and is endowed with a variety of cultures. The city represents an attractive amalgamation of ancient architecture and the ebullience of growth and enterprise. Bhubaneswar is a well-known destination for tourists from all over the world. Bhubaneswar, Puri and Konark form the Golden Triangle of Odisha. The famous Jagannath Temple and beautiful seashores at Puri and the Sun Temple of Konark are the main attractions. Other attractions include Lingaraj Temple, Nandankanan Zoological Park, Udayagiri and Khandagiri Caves, Planetarium and many more! Odisha is known for its exquisite handicrafts: Silver Filigree, Horn Work, Pattachitra, Metalware, Applique Work and Stoneware. You will find the Twin Cities of Bhubaneswar and Cuttack very attractive to visit and shop. The weather in February is pleasant and may occasionally require light winter clothing.

Location Map





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RISK ASSESSMENT, GLOBAL CERTIFICATION

Certificate of Registration

This is to certify that the
**OCCUPATIONAL HEALTH & SAFETY
MANAGEMENT SYSTEM**

of
CENTRAL TOOL ROOM & TRAINING CENTRE
B-36, Chandaka Industrial Area, Bhubaneswar, Orissa, 751024, INDIA

for
Design, Manufacture of Tools, Precision Machined Components, Assembly &
Testing of Fuel System Line Replacement Units, Hydraulic Filter Systems and
Conducting Skill Development Programmes for Students, Industries &
International Participants

has been assessed and registered against the provisions of
OHSAS 18001:2007

With
Registration Number: 11012027 Project: 43-12027-1-Q
Certification Date: 25 September 2012 NACE: DJ 28.75
Renewal Due Date: 11 September 2015 Exclusions: None
Approved By: Alan Cherry
Group Chief Executive Officer



GlobalGROUP
RISK ASSESSMENT, GLOBAL CERTIFICATION

Certificate of Registration

This is to certify that the
QUALITY MANAGEMENT SYSTEM

of
CENTRAL TOOL ROOM & TRAINING CENTRE
B-36, Chandaka Industrial Area, Bhubaneswar, Orissa, 751024, INDIA

for
Design, Manufacture of Tools, Precision Machined Components, Assembly &
Testing of Fuel System Line Replacement Units, Hydraulic Filter Systems and
Conducting Skill Development Programmes for Students, Industries &
International Participants

has been assessed and registered against the provisions of
ISO 9001:2008
International Standard

With
Registration Number: 26012027 Project: 43-12027-1-Q
Certification Date: 25 September 2012 NACE: DJ 28.75
Renewal Due Date: 14 September 2015 Exclusions: None
Approved By: Alan Cherry
Group Chief Executive Officer



GlobalGROUP
RISK ASSESSMENT, GLOBAL CERTIFICATION

Certificate of Registration

This is to certify that the
ENVIRONMENTAL MANAGEMENT SYSTEM

of
CENTRAL TOOL ROOM & TRAINING CENTRE
B-36, Chandaka Industrial Area, Bhubaneswar, Orissa, 751024, INDIA

for
Design, Manufacture of Tools, Precision Machined Components, Assembly &
Testing of Fuel System Line Replacement Units, Hydraulic Filter Systems and
Conducting Skill Development Programmes for Students, Industries &
International Participants

has been assessed and registered against the provisions of
ISO 14001:2004
International Standard

With
Registration Number: 45E12027 Project: 43-12027-1-Q
Certification Date: 17 October 2012 NACE: DJ 28.75
Renewal Due Date: 11 September 2015 Exclusions: None
Approved By: Alan Cherry
Group Chief Executive Officer



Please validate the authenticity and status of this certificate at www.globalsg.com

ZERTIFIKAT • CERTIFICATE • 証明書 • CERTIFICADO • CERTIFICAT

CERTIFICATE

The Certification Body of
TÜV SÜD AMERICA INC.

hereby certifies that

**Central Tool Room & Training Centre
Aerospace Division
B-36, Chandaka Industrial Area, PO : KIIT
Bhubaneswar – 751024, India**

has implemented a Quality Management System
in accordance with:

ISO 9001:2008 and AS9100:2009
The assessment was conducted in accordance with the requirements of AS9100A.
TÜV SÜD America Inc. is accredited under the aerospace Registrar Management Program.

The scope of this Quality Management System includes:

**Manufacturing of Metallic Aerospace
Components and Assembly of
Line Replaceable Units (LRUs)**

Certificate Expiry Date: March 06, 2015

Certificate Registration No: 951 09 4895

Effective Date: March 07, 2012



Gary W. Miller
V.P. Regulatory Affairs



TÜV SÜD AMERICA INC • 10 Centennial Drive • Peabody, MA 01960 USA • www.TUVAmerica.com TÜV®



सूक्ष्म, लघु एवं मध्यम उद्यम
MICRO, SMALL & MEDIUM ENTERPRISES



ISO 9001:2008, ISO 14001:2004,
ISO 29990:2010, AS 9100B,
& OHSAS 18001:2007

CENTRAL TOOL ROOM & TRAINING CENTRE

(MSME TOOL ROOM)

Ministry of Micro, Small & Medium Enterprises, Govt. of India,
B-36, Chandaka Industrial Area, Bhubaneswar - 751 024, Orissa, India
Phone : 0674-3011700, 2742100, Fax : 0674-3011750, 2743061
E-mail : cttc@satyam.net.in, Website : www.cttc.gov.in

For suitable candidates do contact :

Placement Head

Mobile : 09437965670, 09337118456, Phone : 0674-3011735

E-mail : placement@cttc.gov.in, cttcplacement@satyam.net.in or skrout@cttc.gov.in