

## Short Term Courses

COURSES FOR DIPLOMA/DEGREE IN MECHANICAL ENGG. OR EQUIVALENT		
COURSE NAME	DURATION	COURSE FEE
Auto CAD (Mechanical)	1 Month	₹7,000/-
CATIA	1 Month	₹8,000/-
Creo	1 Month	₹8,000/-
UNIGRAPHICS	1 Month	₹8,000/-
SOLIDWORKS	1 Month	₹8,000/-
MASTER CAM	1 Month	₹8,000/-
CNC Milling & Turning	1 Month	₹8,000/-
ANSYS	2 Weeks	₹8,000/-
3D Printing & Additive Manufacturing	2 Weeks	₹8,000/-
COURSES FOR DIPLOMA/DEGREE IN ELECTRICAL/ ELECTRONICS ENGG. OR EQUIVALENT		
COURSE NAME	DURATION	COURSE FEE
PLC	1 Month	₹8,000/-
VLSI	1 Month	₹8,000/-
SCADA	1 Month	₹8,000/-
Advanced Embedded System	1 Month	₹8,000/-
ROBOTICS	1 Month	₹8,000/-
Lab View	1 Month	₹8,000/-
E.CAD	1 Month	₹7,000/-
COURSES FOR DIPLOMA/DEGREE IN CIVIL ENGG.		
COURSE NAME	DURATION	COURSE FEE
Auto CAD (Civil)	1 Month	₹7,000/-
STAAD PRO	1 Month	₹8,000/-
3Ds Max	1 Month	₹8,000/-
REVIT	1 Month	₹8,000/-
COURSES FOR ANY GRADUATE		
COURSE NAME	DURATION	COURSE FEE
MAT LAB	2 Weeks	₹8,000/-
Hardware Networking	1 Month	₹5,500/-
.NET	1 Month	₹5,500/-
Core JAVA	1 Month	₹5,500/-
Advanced JAVA	1 Month	₹5,500/-
C	1 Month	₹3,500/-
C++	1 Month	₹3,500/-
Entrepreneurship Skill Development Program	2 Weeks	₹2,500/-
Internet of Things	2 Weeks	₹8,000/-

**ALL THE ABOVE SHORT TERM COURSE START ON 1ST WORKING DAY OF EVERY MONTH**

## ADVANCE CERTIFICATE COURSE IN INSPECTION & QUALITY CONTROL (ACCIQ)



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

### MSME TOOL ROOM, BHUBANESWAR

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**CENTRAL TOOL ROOM & TRAINING CENTRE**  
Bhubaneswar, Odisha

## NSQF Complied Long Term Courses

COURSE NAME		DURATION	COURSE FEE
<b>COURSES FOR 10TH PASS OUT</b>			
Diploma in Tool & Die Making	DTDM	4 Year	₹19,000/- (per Semester)
Diploma in Mechantronics	DIM	3 Year	₹19,000/- (per Semester)
ITI Machinist	ITIM	2 Year	₹28,000/- (per Year)
ITI Fitter	ITIF	2 Year	₹28,000/- (per Year)
ITI Electrician	ITIE	2 Year	₹28,000/- (per Year)
Condensed Course in Tool & Die Making	CTDM	1 Year	₹66,000/-
Certificate Course in CNC Turning & Milling	CCTM	1 Year	₹32,000/-
<b>COURSES FOR UNDER MATRIC</b>			
Certificate Course in Machine Operation	CCMO	1 Year	₹18,000/-
<b>COURSES FOR ITI STUDENTS</b>			
Certificate Course in Advance Machining	CCAM	1 Year	₹32,000/-
Advance Certificate Course in Machine Maintenance	ACCMM	1 Year	₹32,000/-
Advance Certificate Course in CNC Machining	ACCCM	1 Year	₹34,000/-
Advance Certificate Course in Welding Technology	ACCWT	1 Year	₹50,000/-
Certificate Course in Machining	CCM	6 Months	₹22,000/-
Certificate Course in Fitting & Rigging	CCFR	6 Months	₹32,000/-
Suryamitra	-----	1.5 Months	₹10,000/-
<b>COURSES FOR DIPLOMA IN MECHANICAL ENGG. OR EQUIVALENT</b>			
Post Diploma in Tool & Die Manufacturing	PDTDM	1 Year	₹54,000/-
Post Diploma in CAD/CAM	PDCC	1 Year	₹54,000/-
Advance Diploma in CNC Programming Techniques & Practice	ADCNC	6 Months	₹34,000/-
<b>COURSES FOR DEGREE IN MECHANICAL ENGG. OR EQUIVALENT</b>			
Post Graduate Diploma in Tool Design & CAD/ CAM	PGTD	1 Year	₹60,000/-
Post Graduate in Aerospace Manufacturing	PGAM	1 Year	₹60,000/-
Master Certificate course in CAD / CAM	MCC	6 Months	₹36,000/-
<b>COURSES FOR DIPLOMA IN ELECTRICAL/ELECTRONICS ENGG. OR EQUIVALENT</b>			
Advanced Diploma in Machine Maintenance & Automation	ADMMA	6 Months	₹34,000/-
Advanced Embedded Technology	AET	6 Months	₹34,000/-
Certificate Course in Electrical Equipment Repair & Maintenance	CCERM	6 Months	₹34,000/-
Post Diploma in Industrial Automation & Robotics	PDIAR	1 Year	₹60,000/-
<b>COURSES FOR DEGREE IN ELECTRICAL/ELECTRONICS ENGG. OR EQUIVALENT</b>			
Master Certificate Course in Automation & Process Control	MCCAPC	6 Months	₹36,000/-
<b>COURSES FOR DIPLOMA IN MECHANICAL/ ELECTRICAL/ELECTRONICS ENGG. OR EQUIVALENT</b>			
Post Diploma In Mechatronics	PDIM	1 Year	₹54,000/-
<b>COURSES FOR DIPLOMA/DEGREE IN CIVIL ENGG.</b>			
Post Diploma in Structural Design & Analysis	PDSDA	1 Year	₹54,000/-
Advance Diploma in Structural Design & Analysis	ADSDA	6 Months	₹34,000/-
<b>COURSES FOR ANY GRADUATE</b>			
Advance Certificate Course in Inspection & Quality Control	ACCIQ	6 Months	₹22,000/-
Advance Diploma in Computer Hardware & Networking Management	ADCHNM	6 Months	₹34,000/-
Advanced Certificate Course in Software Application	ACCSA	6 Months	₹22,000/-

## ADVANCE CERTIFICATE COURSE IN INSPECTION & QUALITY CONTROL (ACCIQ)

### Introduction to CTTC:

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-operative 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 and Kalinga nagar, Odisha. It believes its bench marking its standards not only against the tool room and training centers in India and the world. The zeal and experience and commitment of employees has been pushing the Centre to achieve the greater height of quality industry oriented training programs for different levels and different discipline students and production of highly precision components for tool and die making, automobile and aerospace components.

### Objectives of this course

Learners who attain this qualification are competent in

- Inspection and Quality Control and get a job in the Quality Control Inspector/ Quality Controller in Manufacturing Sector.
- Qualified learners who attain the above skill can also become an entrepreneur.

### Who can avail this opportunity:

Any Science Graduate or equivalent are eligible for taking admission. The company sponsored candidates will be preferred. Unemployed /fresh graduate holders and those final year students awaiting result can be apply.

**NSQF Qualification:** Level – 5

**Duration:** 6 months

**Occupation of Qualification:** Job Inspector / Quality Control Inspector in Manufacturing Sector

**Progression of Occupation from Qualification:** After completion of course and after 3 years of field experience the trainee can work as a QC Inspector and after 5 years of experience, the person can work as a Workshop Supervisor (QC).

### Fee:

₹ 22000/-per participant to be paid in the following instalments.

At the time of registration	-	₹ 1,000/-
First Instalment	-	₹ 10,000/- (At the time of admission)
Second Instalment	-	₹ 11,000/- (After completion of three month)
Insurance Fee	-	₹ 300/- (At the time of admission)
NSQF Assessment Fee	-	₹ 500/- (At the time of admission only for general)

22.5% seats are reserved for SC/ST candidates for whom no course fee will be charged subject to production of two photocopies of caste certificate duly attested by Greeted Officer. However, all other fees/deposits is to be paid in case of admission. Caste Certificate in Original from competent authority is to be produced for verification at the time of admission which may be revived from the issuing authority.

### COURSE CONTENT :

Sr. No.	Title and Identification code of component	Estimated size (learninghours)
1.	Engineering Drawing	96
2.	Engineering Metrology	96
3.	Workshop Calculation	96
4.	Total Quality Management	48
5.	AutoCAD	48
6.	MasterCAM	24
7.	N.X (UNIGRAPHICS)	24
8.	Inspection (CMM)	132
9.	Employability skill	96
10.	Inspection & Quality Control -On Job Training	120

### ELIGIBILITY TO APPEAR IN THE EXAM:

Minimum 80% attendance is compulsory for the students to appear for the assessments.

### MARKING SCHEME:

Sr. No.	Method of Assessments	Weightage	Evaluator
1	Practical test	25	<b>Trainer + Moderator (Head of Dept.) + Examiner nominated by Examination cell</b>
2	Written test (Engineering Metrology)	10	
3	Communication/Employability skills	10	
4	Workshop calculation	10	
5	Engineering Drawing	10	
6	Quality Management System	10	
7	Internal assessment	25	
<b>Total</b>		<b>100</b>	

### PASSING MARKS:

Passing criteria is based on marks obtain in attendance record, term works, assignments, practical's performance, viva or oral exam, module test, class test, practical exam and final exam

Minimum Marks to pass practical exam – 60%

Minimum Marks to pass theory exam – 40%

### DETAILED COURSE PLAN FOR 6 MONTHS:

	Contents (chapters/topics)
<b>Engineering Drawing</b>	Drawing equipment's. Dimensioning Techniques. Recognize the points in various quadrants. Development of surfaces of objects. Orthographic projection of machine parts. Isometric projection and views of solids and machine parts. Temporary fastenings used in engineering applications. Preparation of assembly drawing. Surface finish symbols. Preparation of detail drawing, assembly and part list.
<b>Engineering Metrology</b>	Introduction to basic Metrology. Fixed & Indicating Gauges. Measuring Machines. Form Errors Screw Threads.
<b>Workshop Calculation</b>	Units, Ratio & proportion. Density. Percentage. Algebra. Mensuration. Trigonometry. Graph. Indices Quadratic equations.
<b>Total Quality Management</b>	Introduction. Quality policy and quality organizations. Management systems and quality management principles for excellence Quality System.
<b>Auto CAD Theory</b>	Introduction to AutoCAD. Drawing. Block & defining block. Dimensioning and Detailing. Drafting generate standard.
<b>Master CAM</b>	Capability of CAM Software and Introduction to Master CAM. Scope of CAM software in Market advantages of CAM. Introducing CNC machining by using CAM. Distinguish between Various types of CAM software and Master CAM. CAM software features. Concept of hardware & software. Introduction to master CAM environment. To understanding 2D drawing. Creation of basic geometry like Point, line, rectangle, arc, ellipse, & polygon. Modify Like fillet, chamfer, Trim, Break, Join, Extend, Dragging spline to arc, Break, Drafting, Dimension etc. Transformation of object - Mirror, Rotate, Translate, Scale. Selection Methods Creating Groups / Masking of entities / Assigning / Changing colors. Chain / Window / Area / Group / Delete / Undelete / Undo. Transformation of object - Mirror, Rotate, Translate, Scale.
<b>NX</b>	Capability of CAD Software Introduction to NX (Unigraphics). Criteria for selection of CAD workstations, Geometric modelling, entities, 2D & 3D Primitives. Comparison of various CAD Software. CAD software features. Technical terms related to NX (Unigraphics). Drawing sketches for solid models. Creating sketches in the Sketch task environment & Modelling Environment. Various Sketching Tool. Editing, Extruding, Revolving sketches. Adding Geometric & Dimensional Constraint to sketches.

<b>Inspection (CMM)</b>	Coordinate metrology, Machine tool metrology, Surface metrology Basics of gear and thread metrology.
<b>Employability Skill</b>	English Literacy Reading / Writing, English Literacy Speaking / Spoken English, Basics of Computer, Word processing and Worksheet, Motivational Training, Behavioural Skills Safety & Health Environment Concept of Entrepreneurship.
<b>Inspection &amp; Quality Control (on job training)</b>	Introduction to Inspection & Quality Control. History & development of Inspection & Quality Control. Conventional Vs. non-conventional machine tool. Numerical control on CMM machine tools CMM control and Calculation of technological data for CMM machining. CMM clamping system. Implementation of JH for CMM Basic health and safety Application Numerical Control, Advantages, & Disadvantages, Adoptive Control System. Practical training & workshop for above sub topics on CMM Machine.

### How to apply:

Application form attached with the broacher be filled up & mailed to Sr. Manager (Training) along with a D/D of ₹1000.00 on or before \_\_\_\_\_ In the event of selection this money will be adjusted in the course fee otherwise refund will be given on or before one week of course starts. Admission notification will be issued immediately after the last date of receipt of application and selected candidates will be required to pay fees within 15 days on or before \_\_\_\_\_ and report for training from \_\_\_\_\_

### Hostel Accommodation:

Dormitory accommodations can be arranged in the CTTC guest house which can be booked on advanced request. The accommodation charges will be ₹1500.00 per month per bed.

### Uniform:

The candidates will have to get uniforms, dress stitched at their own cost as per the colour & design specified by the center.

### Certification:

After successful completion of training main certificate with grade, mark sheet & project certificate will be issued separately to the trainees.

### Placement Help:

CTTC placement cell will make efforts to contact & invite companies to conduct campus interviews; however, no guarantee can be given for placement/employment. Interested trainees can be registered by paying ₹3,000/- each towards placement registration at start of the programme and in case of trainee is not successful from getting placement he/she may be refunded ₹2,000/-.

### GENERAL RULES & REGULATIONS FOR TRAINEES:

- CTTC reserves the right to reject any application without assigning any reason. Incomplete applications are liable to be rejected.
- Registration Fee is Non Refundable, in case any candidate cancels his admission for any reason.
- Course Fee once paid will not be refunded & Registration/ Course Fee is not transferrable.
- Insurance & other charges as specified for the course to be paid but the trainee in addition to the course fee as applicable.
- All the trainee will be ensure discipline within the campus.
- Trainee shall be required to wear uniform & shoes as prescribed by the institute and possess I-Card compulsory during training.
- Mobile Phones, Pen Drives, CD any other related items are not permitted inside CTTC premises.
- Regular attendance will have to be maintained by the trainee as per course schedule & 80% attendance is compulsory in all subjects individually.
- Trainees will abide by the examination rules and regulations displayed on Notice Board of CTTC and as amended.
- Leave without information/ permission will not be entertained.
- Trainees going on leave or home during vacation should inform course coordinator compulsorily.
- No trainee shall be organize/ conduct any meeting within the campus.
- The Machines/ Equipment/ Furniture must be handled carefully. No act of damage to CTTC property shall be carried out by the trainee, any loss or damage to property, including water & electricity usage.
- Smoking & chewing tobacco, possessing or drinking alcoholic beverages in any form is strictly prohibited within CTTC premises.
- Ragging is strictly prohibited in the premises.
- Writing any Comment/ Remarks/ Name on doors, walls, toilet, and notice board is strictly prohibited.
- Violation of above & any other Rules, Regulations, Disciplines and Conduct are liable for disciplinary action.