PROSPECTUS FOR POST GRADUATE DIPLOMA IN TOOL DESIGN & CAD/CAM (PGDTD & CC)-2019
NSQF COMPLIED (LEVEL-8)

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Central Institute of Tool Design
Balanagar, Hyderabad, PIN-500037
ABOUT


The Institute was established in the year 1968 by Government of India with the assistance of UNDP and ILO as an executing agency. It was converted into a Government of India Society in 1970 under the administrative control of the Ministry of MSME. The Development Commissioner; Ministry of MSME is the ex-officio Chairman of the Governing Council. The Principal Director is the Chief Executive Officer of the Institute.

ABOUT NSQF

The National Skills Qualification Framework (NSQF) is a competence-based framework that organizes all qualifications according to a series of knowledge, skills and aptitude. These levels, graded from 1 to 10, are defined in terms of learning outcomes which the learner must possess regardless of whether they are obtained through formal, non-formal or informal learning. NSQF in India was notified on 27th December 2003. All other framework, including the NVEQF (National Vocational Educational Qualification Framework) released by the Ministry of HRD, stand superseded by the NSQF.

The curriculum of the NSQF courses is based on the outcomes acquired by the learners after completion of the course. All the NSQF compliance courses have been vetted by several related Industries.

Under NSQF, the learner can acquire the certification for competency needed at any level through formal, no-formal or informal learning. In that sense, the NSQF is a quality assurance frame work.

Currently more than 100 countries have or are in the process of developing national qualification frameworks.

AIMS & OBJECTIVES


b) Provision of advisory, consultancy and common service facility & service to small scale units including assistance in the design and development of tools for various processes, Calibration of Mechanical Measuring Instruments.

c) Recommending measures to standardize tools and tooling elements, components of Jigs & Fixtures, Dies & Moulds, Press Tools and other tools.

d) Production of Jigs & Fixtures, Press Tools, Dies & Moulds, Gauges and Special Cutting Tools subject to the condition that job works undertaken by the Institute should suit to the needs of the training.

The Institute has a well equipped Tool Room with sophisticated CNC machines like CNC EDM, CNC Wire Cut EDM 4-Axis & 5-Axis High Speed Machining Centres, and 3D Coordinate Measuring Machine with Scanning & Digitization facilities. The Institute is equipped with latest version of EMCO Table Top CNC Turning and Milling machines with closed loop system to impart training in CNC Programming.

The Calibration laboratory is set up in CITD with Universal Horizontal Microscope ULM OPAL600 Carl Zeiss Technology, Germany and Slip Gauge Measuring Unit 826 with Millitron 1240, Mahr, Germany to Calibrate Limit
Gauges, Micrometers, Dial Indicators, etc.

The CAD/CAM Centre is equipped with latest configuration workstations and softwares like AutoCAD, Pro-E, CATIA, ANSYS, Hypermesh, Unigraphics, Master CAM, Del CAM, Nastran & Patron, ABACUS, LS-DYNA, Q-FORM, SOLIDCAST, etc.

The Institute is also equipped with an Automation Centre with Programmable Logic Control Systems, Hydraulic, Pneumatic and Electronic Controls with Simulators.

CITD has a Library with a collection of technical books in Tool & other Engineering fields and subscribes to various International journals like CIRP Annals, American Machinist, Journal of Engineering Materials & Technology (ASME), Precision Engineering (JAPAN) and Precision Tool Maker, etc. The documentation centre collects and organizes information and data useful for the technological advancement in Tool Engineering. For the dissemination of information, the centre also provides technical enquiry service.

**POST GRADUATE DIPLOMA COURSE**

**Post Graduate Diploma in Tool Design & CAD/CAM (PGDTD & CC)**

<table>
<thead>
<tr>
<th>Duration</th>
<th>2340 Hrs/18 Months (3 Semesters)</th>
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<tr>
<td>Age</td>
<td>Upto 45 Years.</td>
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<tr>
<td>No. of Seats</td>
<td>60</td>
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<td>Mode of Selection</td>
<td>Through Entrance Examination</td>
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<tr>
<td>Eligibility for Admission</td>
<td>B.E/B.Tech (Mech. / Prod. or equivalent)</td>
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<tr>
<td>Course Fee</td>
<td>₹ 35,000 /- per Semester</td>
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**MODE OF APPLICATION**

Application form can be downloaded from our website www.citdindia.org under the link **Post Graduate Diploma Admissions-2019** and the filled in application form should be sent to **The Director (Trg), CITD, Balanagar, Hyderabad-500 037**, along with prescribed application cost by way of Demand Draft drawn in favour of **Principal Director, CITD, Hyderabad** or

By Online at [www.citdindia.org](http://www.citdindia.org) by selecting PAY ONLINE ➔ SBI Payment Gateway ➔ Click the Check Box ➔ Proceed ➔ Select State of Corporate/Institution ➔ All India Select Type of Corporate or Institution Select Educational Institutions Name Central Institute of Tool Design Select Payment Category ➔ Select Application Fee ➔ Select Training Center Location ➔ Select Hyderabad Select Long Term Course ➔ Select PGTD ➔ Fill relevant details & click submit.

Further details can be obtained from Long Term Training Department, Diploma Block, Central Institute of Tool Design, Narsapur X Road, Balanagar, Hyderabad-500037, on any working day between 9:30 a.m. and 5:00 p.m. (Weekly Holiday-Sunday).

**ENTRANCE EXAMINATION**

**Syllabus**

**ENGINEERING MATERIALS:**


**FOUNDRY:**

Patterns, pattern allowances, moulding and core making, gating and risering calculations, Casting processes; sand,
**WELDING:**
Gas, arc and resistance welding. Tungsten inert gas (TIG), metal inert gas (MIG) and atomic hydrogen welding; Power sources of welding, Brazing, Soldering and adhesive bonding.

**METAL WORKING:**
Basic plasticity for metal forming. Hot and Cold working, Forming processes; blanking, piercing and deep drawing. Technology of wire drawing, rolling and forging processes, Force and power calculations. Elements of powder metallurgy.

**MACHINE TOOLS:**
Construction, operation, kinematics and applications. Automatic and semiautomatic machine tools, indexing attachments. Jigs and fixtures, Elements of N/C machine tools.

**MACHINING PROCESSES:**
Turning, drilling, shaping, planing, boring, reaming, milling, grinding and finishing processes. Production of Screw threads. Gear manufacturing processes; hobbing and shaping.

Introduction to unconventional machining processes like EDM, ECM, USM, Laser machining etc.

**LIMITS, FITS AND TOLERANCES:**
Fundamental deviation, basic size, hole basis and shaft basis system, recommend fits for assembly.

**INDUSTRIAL ENGINEERING:** Plant layout and material handling. Work study. Economic analysis; breakeven analysis, present value criterion.

Forecasting. Elements of production planning and control; machine loading, sequencing and inventory control. Statistical quality control. Elements of linear programming and PERT / CPM in production system.

**STRENGTH OF MATERIALS:**

**THEORY OF MACHINES:**

**MACHINE DESIGN:**
Material and manufacturing considerations. Design of elements subjected to static and variable stresses. Factor of safety. Stress concentration. Design of flanged joints and seals, shafts and keys, helical springs, rigid and flexible. couplings, universal (Hooke's) joints, Oldham

**STATICS :**
Simple applications of equilibrium equations.

**DYNAMICS :**
Simple applications of equations of motion. Simple harmonic motion. Work, energy, power.

**PRODUCTION MANAGEMENT :**
Method and time study, motion economy and work space design, operation and flow process charts. Product design and cost selection manufacturing process.

Break-even analysis, Site selection. Plant layout. Materials handling, Selection of equipment for job shop and mass production, Scheduling, despatching, routing.

**METROLOGY :**
Measurements, linear angular comparators, measuring instruments.

**ENGINEERING DRAWING:**
First angle and third angle projections, Sections of solids, Missing lines, views, representation of screw threads, Ability to visualize in three dimensions and represent them in isometric/ orthogonal / perspective views.

**PSYCHOMETRIC TEST**

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**Duration**
1⅓ hours (Objective Type).

**Declaration of Result**
Merit list of the candidates will be displayed on the notice board of the institute as well as on Website www.citdindia.org.

As per the list, all the interested candidates are required to be present on the counselling day as per the counselling dates along with all the original certificates & prescribed fees etc.

**Venue (for entrance)**
CITD Balanagar, Hyderabad. Pin - 500 037

**Use of Unfair Means**
Use of unfair means by candidate at the entrance examination whether detected at the time of examination, evaluation or at any stage will lead to cancellation of his/her admission into the course.

**RESERVATION**
Reservation exists as per Govt. of India Rules. Age Relaxation for SC/ST category candidates exist as per Govt. of India Rules.

**DETAILS OF FEES & PAYMENT**

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<tr>
<th>S. No.</th>
<th>Item/Fees</th>
<th>Amount</th>
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<tbody>
<tr>
<td>1</td>
<td>Registration Fee</td>
<td>₹1, 800/-</td>
</tr>
<tr>
<td>2</td>
<td>Course Fee Per Semester</td>
<td>₹35, 000/-</td>
</tr>
<tr>
<td>3</td>
<td>Caution Deposit</td>
<td>₹5, 000/-</td>
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This syllabus is indicative only, not exhaustive.
Course fee of every semester from 2nd semester onwards should be paid within 30 working days from the date of commencement of semester.

COUNSELLING

Intimation of Date of Counseling

The date of counselling will intimated to the qualifying candidates through SMS/E Mail and notification through our website.

Documents to Be Handed Over At the Time of Counselling for Admission

a) Original certificates of qualifying examination, i.e., SSC/Matric/ B.E. The original certificates will not be given back to the trainees under any circumstance till they complete the scheduled training period at this Institute.

b) Certificate of Physical fitness from any Assistant Civil Surgeon. The Institute reserves the right to send the candidate for further Medical examination, if necessary.

c) The trainee should give an undertaking for good conduct and behaviour and to abide the rules & regulations as prescribed by the Institute.

These original certificates once submitted will not be given back to the trainees under any circumstances till they complete the scheduled training period at this Institute. Therefore candidates are advised to take sufficient number of photo copies to keep with them before submitting the originals to CITD at the time of counselling.

POST ADMISSION INFORMATION & GUIDELINES

1. Medium of instruction – English

2. Working hours 09:30 a.m. to 05:15 p.m. with Sunday as weekly holiday. (Weekly holidays & working hours are liable to change.)

3. Student shall be allowed to appear for the end examinations, if he/she possesses minimum 85% attendance only.

GENERAL TERMS AND CONDITIONS TO BE FOLLOWED DURING TRAINING:

a. Hostel: Limited hostel facility is available. The students will have to pay hostel rent in advance as per rules and regulations of the hostel.

b. No traveling allowance or any other allowance will be paid for attending counseling/ Joining the course or on termination thereof.

c. Final year trainees are exposed to campus interviews, by intending industries. They can appear for interviews and get absorbed. However, the Institute does not guarantee any employment or absorption.

d. The trainees shall not cause any damage or loss to the property of the Institute, failing which they are liable to bear the loss.

e. Any information given in the application by the candidate, if, found incorrect after selection, the trainee is liable for such punishment as may be deemed fit including his/her disqualification and / or dismissed from training course.

f. The trainees are expected to complete the assignments as per schedule of training programs.

g. The trainees will have to strictly undergo the training as per the schedule and instructions and comply with all the rules of discipline as may
be in force from time to time. Copying in examination and malpractice during the exams will be viewed seriously.

h. The trainees are not permitted to join part-time / evening courses of study conducted by any other University / Institute.

i. The trainees are expected to maintain utmost discipline and good manners inside and outside the campus and not get involved in activities which cause blemish to the good image of the institute.

j. The trainees have to follow the rules and regulations pertaining to any department of the Institute.

k. The Institute reserves the right to fill up any vacant seat from among the candidates present at the time of counseling as per the merit, subject to payment of requisite fee applicable to self sponsored.

l. No request for extension of time for submission of proof of pass or submission of original and the trainees have to abide by these rules.

m. The Institute reserves the right to alter, vary change and / or modify the rules governing the admissions, or any other procedure from time to time depending upon exigencies of training and the trainees have to abide by these rules.

n. The trainees have to follow the rules and regulations made by the institute pertaining to any department, examination, hostel, discipline etc.

o. The Institute reserves the right to terminate the trainee at any time at its discretion for misconduct/indiscipline/irregular attendance, breach of rules etc. In such an event, the course fee paid by the candidates shall not be refunded.

p. The Institute shall take all precautionary measures with regard to safety. However, the trainees should decide to join the course at their own free will and at their own risk. In case of any injury or any disablement (temporary/permanent) suffered by the trainees during the course due to any accident or otherwise, the Institute shall not be liable to pay any compensation whatsoever. The trainees shall indemnify the Institute in this account.

q. Trainees shall arrange at their cost, all stationary, drawing and other instruments and books prescribed for the course.

r. Ragging of any kind will be viewed seriously and offenders shall be liable to be prosecuted under the law. Their training will be terminated and the fee paid by them shall be forfeited.

They will not be allowed to rejoin the semesters/course afresh.

s. The trainees should give an undertaking to abide by the rules & regulations of the training.

t. All matters concerning the admissions and conducting the course shall be subject to Hyderabad jurisdiction only.

The merit list of the candidates will be displayed on the notice board at the Institute as well as on CITD Website www.citdindia.org. As per the list, all the interested candidates are required to be present on the counseling day as per the counseling dates along with all the original certificates & prescribed fees etc. Fee once paid will not be refunded.
IMPORTANT DATES

❖ **Availability of applications: 08-07-2019 (Monday)**

❖ **Last date for receipt of filled-in application: 07-09-2019 (Saturday)**

❖ **Date of Entrance Exam (Tentative): 14-09-2019 (Saturday)**