

Brief Profile of the Department:

The department of Mechanical Engineering offers an UG program, seven PG programs and a Ph.D program as well. There are 39 qualified and experienced faculty in the department. The department has liaison with reputed industries and R&D organizations like NFTDC, BHEL, DMRL, DRDL, CMTI, etc. Presently the department is handling several R&D projects and consultancy works. The department has also been recognized as a QIP centre for M. Tech and Ph.D programs.

Teaching-Learning Centre of NIT Warangal:

The Teaching-Learning Centre (TLC) is established at NIT Warangal with grants from the MHRD, GoI under the scheme, 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNTT). Many senior and young faculty members across various departments of the Institute are associated with this center as members of the Core-Team. One of the important objectives of the center is to conduct training programs for Aspiring, Newly Inducted and In-Service faculty in Science and Engineering disciplines. Other activities of the TLC include preparation of e-learning materials, offering courses on-line, curriculum development, carrying out research in pedagogy and integrating ICT into teaching-learning process.

About NIT Warangal:

National Institute of Technology Warangal, was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 32 post-graduate programmes besides doctoral programmes. About 5000 students across the country and about 500 international students study in the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state of the art library, seminar halls, guest houses and laboratories.

Confirmation of Participation:

On receipt of the registration form along with proof of payment of registration fee, eligible participants will be sent confirmation of their participation through Email **immediately**. As the programme is conducted in an interactive mode with hands-on sessions, the number of participants in the workshop is limited to **40**. **Candidates are advised to register early to avoid disappointment.**

Note: It is necessary for the participants to bring their own LAPTOPS loaded with the desired CAD software in order to participate in this workshop.

Address for Correspondence:

Dr. Y. Ravi Kumar

Coordinator, A One-Week FDP on 3D Printing Technology in Engineering Education
Department of Mechanical Engineering,
National Institute of Technology, Warangal
Telangana State, India- 506 004.
Mobile: +91 9440868867
Email: raviyumar@yahoo.com

About Warangal:

Warangal is the second largest city of the new state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is two km away and Warangal Station is 12 km away) and by Road (NH 202). Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile Kakatiya dynasty. It is a place of tourist attraction with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Lankavaram Lake.



**PMMMNTT
Scheme**



*A One-Week Faculty Development Programme
on*

3D Printing Technology in Engineering Education

05-10 June, 2017

Call for Registration and Participation

Coordinators

**Dr. Y. Ravi Kumar
Prof. L. Krishnanand**

Organized by

**Department of Mechanical Engineering
In Association with
Teaching-Learning Centre
National Institute of Technology
WARANGAL – 506 004
Telangana State, INDIA**



Overview of the Course:

3D printing is defined by the ASTM F42 committee as the fabrication of objects through the deposition of a material using a print head, nozzle, or other printer technology. However, the term is often used synonymously with **additive manufacturing (AM)**. In particular, it is associated with machines that are lower in relative price and overall functional capability. 3D Printing is used to build physical models, prototypes, patterns, tooling components and production parts with materials like plastics, metal, ceramic, glass, and composite materials. 3D Printing systems use thin, horizontal cross sections from computer-aided design (CAD) models, 3D-scanning systems, medical scanners, and video games to produce parts in about every shape imaginable.

Design and manufacturing organizations use 3D Printed parts for products in the consumer, industrial, medical, and military markets, to name just a few. Digital cameras, mobile phones, engine parts, parts and assemblies for airplanes and medical implants are examples of a very long list of products which are benefited by the 3D Printing technology.

Objectives of the Course:

1. To update the participants with the state of the art technologies in 3D Printing.
2. To enable the participants to have experiential learning in 3D modeling, build-setup preparation and 3D printing through hands-on sessions.
3. To enable participants to learn the industrial, real life and pedagogical applications of 3D printing.
4. To facilitate the participants to develop low-cost 3D printers to teach engineering concepts.
5. To empower the participants to offer a course on 3D printing technology at their respective institutions.

Topics in the Course:

- ✓ Global Perspective of 3D Printing Technology
- ✓ Solid Modelling & 3D Printing File Formats
- ✓ STL Files Generation and Correction
- ✓ Modelling of Medical Implants
- ✓ 3D Printing Software & Processes
- ✓ 3D Printing for Large Sized Classes
- ✓ Design & Development of low-cost 3D Printers
- ✓ Laser Assisted Additive Manufacturing
- ✓ Case Studies on – ‘Ideas to 3D Objects’
- ✓ Oral & Maxillofacial Surgeries: Real Case Studies
- ✓ 3D Digitizing & Reverse Engineering
- ✓ 3D Printing Applications: Automobile, Aerospace, Art & Jewelry, Fashion, Medical/Dental, etc.,
- ✓ Curriculum Development of a Course in 3D Printing Technology

Resource Persons:

Faculty from NIT Warangal and reputed institutions/organizations/industries who are in the 3D Printing practice will deliver lectures and hands-on sessions. Partial list of external resource persons is as follows:

1. Dr. G. Padmanabham, Director, ARCI, Hyderabad
2. Mr. K. Guruprasad Rao, Director, Imaginarium, Mumbai
3. Dr. C.P. Paul, Head, Laser AM Lab, RRCAT, Indore
4. Dr. S. Surya Kumar, Assc. Professor, IIT Hyderabad

Registration is Open to:

This program is open to Faculty members working in Engineering institutions/ Professionals involved in training of engineers /Post-Graduate students and Research scholars aspiring for an academic career.

Accommodation:

Accommodation for outstation participants will be provided on request in the Institute Hostels.

How to Apply:

Eligible candidates may apply by submitting the scanned copy of the filled in registration form (attached with this mail/ brochure) by Email to **raviykumar@yahoo.com** on or before **25-05-2017** along with the registration fee.

Registration Fee:

| Category of Participant | Local and NIT Warangal Participants | Residential participants requiring accommodation |
|---|-------------------------------------|--|
| Faculty | Rs. 800/- | Rs. 1500/- |
| Research Scholars | Rs. 400/- | Rs. 750/- |
| Participants from Training Organizations / Consultancy firms/ Coaching Institutes | | Rs. 3000/- |

Note: Registration fee for Faculty and Students of SC/ST category is half of the amounts mentioned above as applicable.

Registration fee may be sent in the form of a DD or remitted through On-line / NEFT to the Bank account given below. Local participants may also pay the registration fee in cash to the Coordinator, Mechanical Engineering Department. Scanned copy of the DD / Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be sent as attachment to the Email: raviykumar@yahoo.com.

| | |
|----------------|---------------------------|
| Account Name | DIRECTOR, NIT WARANGAL |
| Account Number | 52109375198 |
| Bank | State Bank of Hyderabad |
| Branch | REC Warangal (NIT Campus) |
| Branch Code | 20149 |
| IFSC code | SBHY0020149 |

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Sponsored by MHRD, Govt. of India under PMMMNMTT Scheme

REGISTRATION FORM

Name : _____

Date of Birth : _____

Place of Birth: Village/Town/City: _____ Tick as applicable (Rural /
Urban)

District _____ State: _____

Gender (Put a \surd Mark) : Male Female

Category (Tick as applicable) : **Open / OBC / SC / ST / PWD**

Qualification : _____

Designation : _____

Organization : _____

No. of Years of Teaching Experience: _____

Address for Correspondence : _____

Mobile(s): _____

Email(s) _____

Details of Remitting Registration Fee: (i) Amount in Rs. _____

(ii) Name of the Bank Through which Remitted/DD Taken: _____

(iii) On-line Transaction No./ DD No: _____ (iv) Date: _____

Accommodation (Put a \surd Mark) : Required Not Required

Declaration by the Applicant

If selected, I agree to abide by the rules and regulations of the workshop / training programme and shall attend all the sessions.

Date:

Signature of the Applicant

Recommended and Forwarded

Office Seal

Signature of the Head of the Department/ Institution