

# Indian Institute of Technology Tirupati

## Admission to Ph.D and M.S. (Research) Jan-2018 Semester

Indian Institute of Technology Tirupati is the first among the 3rd phase of IITs, to have its foundation stone laid in March 2015. Presently, it is operating from a temporary campus on Tirupati – Renigunta Road and plans are well underway to setup its own campus (about 530 acres) in the coming 2 to 3 years in Merlapaka Village, Yerpedu Mandal, Chittoor District, A.P.

Applications are invited for admission to the M.S. (Research) and Ph.D programme starting in Jan-2018 Semester, as per details given below:

### **Doctor of Philosophy (Ph.D.)**

#### **Research Areas**

##### **1. Engineering**

###### **Civil Engineering:**

Nondestructive Testing & Structural Health Monitoring; Structural Dynamics; Metal Structures; Sustainable Roadway Materials, Construction & Management; Hydraulics & Water Resources Engineering

###### **Computer Science & Engineering:**

Algorithms; Software Engineering; Computer Networks; System Security; and Machine Learning.

###### **Electrical Engineering:**

Signal and Image Processing, Medical Image Analysis, Control Systems, Microelectronics, Computer Vision and Machine Learning.

###### **Mechanical Engineering:**

Manufacturing Science and Engineering, Fluids and Thermal Sciences and Solid Mechanics and Design.

##### **2. Sciences & Humanities and Social Sciences**

###### **2.1. Sciences:**

###### **Chemistry:**

Theoretical and Computational Chemistry (Quantum Theory of Molecules & Materials; Spectroscopic Modeling & Simulations; Equilibrium & Non-Equilibrium Statistical Mechanics, Physics of Polymers, Stochastic Thermodynamics)

###### **Mathematics:**

Fixed Point Theory, Fractals, Inverse Problems.

###### **Physics:**

Experimental Condensed Matter Physics (Strongly Correlated Electron Systems, Multiferroics, Geometrically Frustrated Magnets, Low-Dimensional Quantum Magnets, Single Crystal Growth & Novel Material Discovery, etc.)

## **2.2 Humanities and Social Sciences:**

### **English:**

Indian Writing in English, Comparative Literature, Applied Linguistics, Cultural Studies, Critical Theory, and Indian Aesthetics.

### **Economics:**

Climate Change Economics, Environmental Economics, Natural Resource Management, Development Economics and comparative political economy.

### **Categories of Admission:**

Candidates will be admitted to the Ph.D. programme of the Institute under one of the following categories:

- (a) Regular full-time scholars.
- (b) Research scholars under the external registration programme, sponsored by and employed in an industry/organisation/national laboratories having R&D facilities and recognised by DST or by IIT Tirupati. A research scholar under the external registration programme will normally carry out part or all of his/her research work in the industry/organization/ national laboratory employing the scholar under the supervision of a guide employed in the same organization and a guide at IIT Tirupati. The candidate must have at least two years' experience in the parent organization.

### **Eligibility: Ph.D. in Engineering**

- (a) Candidates with a Master's degree in Engineering/Technology or a Master's degree by Research in Engineering/Technology with a good academic record.
- (b) Candidates with Master's degree in Sciences with a good academic record and of exceptional merit are eligible for the relevant Engineering discipline. They should have a valid GATE score or UGC/CSIR-NET/NBHM or equivalent qualification in the relevant area tenable for the year of registration.
- (c) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a Centrally Funded Technical Institute (CFTI) with an exceptionally good academic record in an eligible discipline will be considered for direct admission to Ph.D. provided he/she has a minimum CGPA of 8/10 (7.5 for OBC- NCL and 7.0 for SC/ST/PwD on a 10-point scale).

### **Eligibility: Ph.D. in Sciences**

- (a) Master's degree in Sciences with a good academic record and having a valid GATE score or UGC/CSIR-NET/NBHM or equivalent qualification tenable for the current year in the relevant area. Master's degree holders in Engineering/Technology are also eligible.
- (b) Candidates who have qualified for the award of Bachelor's degree in Engineering/Technology from a Centrally Funded Technical Institute (CFTI) with an exceptionally good academic record in an eligible discipline will be considered for direct admission to Ph.D. in Sciences provided he/she has a minimum CGPA of 8/10 (7.5 for OBC- NCL and 7.0 for SC/ST/PwD on a 10.0-point scale).

**Eligibility: Ph.D in Humanities and Social Sciences**

Master's degree in an eligible discipline with a good academic record or equivalent and having a valid GATE score or UGC/CSIR- NET/NBHM or equivalent qualification tenable for the current year in the relevant area.

**Master of Science (Research) [M.S. Research]****Research Areas:****Civil Engineering:**

Nondestructive Testing & Structural Health Monitoring; Structural Dynamics; Metal Structures; Sustainable Roadway Materials, Construction & Management; Hydraulics & Water Resources Engineering

**Computer Science & Engineering:**

Algorithms; Software Engineering; Computer Networks; System Security; and Machine Learning.

**Electrical Engineering:**

Signal and Image Processing, Medical Image Analysis, Control Systems, Microelectronics, Computer Vision and Machine Learning.

**Category of Admission:**

- (a) Regular full-time scholars
- (b) Research scholars under the external registration programme sponsored by and employed in the parent industry/organisation having R&D facilities and recognized by DST or IIT Tirupati.
- (c) A Research scholar under the external registration programme will normally carry out part or all of his/her research work in the industry/organisation/national laboratory employing the scholar under the supervision of a guide employed in the same organisation and a guide at IIT Tirupati. The candidate must have at least two years' experience in the parent organisation.

**Eligibility for M.S. by Research**

The minimum educational qualifications for admission to the M.S. by research degree for full time scholars are as follows:

- (a) Candidates with a Bachelor's degree in Engineering/Technology in the relevant departments with valid GATE score.
- (b) Candidates having Associate Membership of the following professional bodies are also eligible for admission to the M.S. programme of their parent discipline provided they have a valid GATE score and have passed both part A and part B of the Membership examinations with a good academic record: The Institution of Engineers (India) (Civil/Mechanical/Electrical and Electronics/Electronics and communications), The Institute of Electronics and Tele-Communication Engineering.
- (c) Engineering graduates from IITs and other Centrally Funded Technical Institutes (CFTI) with a CGPA of at least 8/10 (7.5 for OBC-NCL and 7 for SC/ST/PwD) are eligible for seeking admission, without GATE score, to the MS Programme and they can be offered HTRA, if selected.
- (d) Candidates under External Registration should have the same qualification as in (a) however, valid GATE score is not required.

## General Remarks

- Shortlisted candidates, will have to appear for an interview and/or a written test.
- Reservations for SC/ST/OBC-NCL/PwD shall apply as per GOI rules.
- Financial Assistance is available (HTRA) as per MHRD or other funding agency norms.
- **More details may be found in the INFORMATION BOUCHER.**
- **Applicants should apply through the online portal only**
- The last date for submission of applications is **05-11-2017**.
- The admissions shall be governed by regulations given at IIT Tirupati website.
- No queries will be entertained.

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