

REGISTRATION FORM
Short Term Training Programme
on
Internet of Things
(STTPIoT-19)
October 9-13, 2019

Organized by
Department of Electronics and Communication Engineering
National Institute of Technology, Jamshedpur
in collaboration with
AICTE Training And Learning (ATAL) Academy, Guwahati

1. Name in Block Letters: _____

2. Designation & Affiliation: _____

3. Male/Female: _____

4. Mailing Address: _____

5. Mobile No. : _____

6. E-mail Id : _____

7. Accommodation required (YES/NO) : _____

8. Vegetarian / Non-Vegetarian: _____

Signature of the Applicant with date

Forwarded by the Head of the Department/Institution

Dr./Mr./Ms./Miss _____ is a faculty/PhD Student in our institution and he/ she is permitted to attend the Short Term Training Programme to be held during October 9-13, 2019 at National Institute of Technology Jamshedpur. If selected he/she will be granted necessary leave of absence.

Signature and Seal of the Head of the Department/Organization

N.B.:
 Scanned copy of the registration form should be sent by email
 Interested candidates must fill up Google form available at following link:
www.aicte-india.org/sites/default/files/ATAL/registration/

Organizing Committee
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 Prof. Anil D. Sahasrabudhe, Chairman, AICTE

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 Dr. Swagatdeb Sahoo Dr. Mrutyunjay Rout

TENTATIVE SCHEDULE PLAN

Date	10:00 AM to 11:30 AM		12.00 PM to 1.30 PM		2:30 PM to 4.00 PM	4:15 PM to 4:45 PM
9-10-19	Registration and Inauguration	High Tea	Session 1 Introduction to the Internet of Things		Session 2 Architecture of IoT	
10-10-19	Session 3 Introduction to Sensors	Tea	Session 4 M2M Communication Protocols	Lunch	Session 5 Node-MCU	Tea
11-10-19	Session 6 Cloud Computing Platform		Session 7 Antenna for IoT		Session 8 Hands-on session 1	
12-10-19	Session 9 IoT with Arduino		Session 10 Hands-on session-2		Session 11 Project with Arduino	
13-10-19	Session 12 IoT with Raspberry		Session 13 Raspberry Pi with Python		Session 14 Zigbee and IoT based systems	
				Feedback		Valediction

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Venue:

Department of
Electronics and Communication Engineering
South Annex, NIT Jamshedpur-831014,
Jharkhand, India

About NIT Jamshedpur

National Institute of Technology, Jamshedpur earlier known as Regional Institute of Technology (RIT) was established on 15th August 1960 as a joint venture of Government of India and the Government of Bihar in the chain of Regional Engineering Colleges in India with the aim to generate technical graduates of highest standards who could provide technological leadership to the region. On 27th December 2002, RIT was transformed to National Institute of Technology, Jamshedpur with the status of a Deemed University. The Institute has 12 departments including engineering, science and humanities. It has more than 200 faculty, 4000 students and 150 administrative and supporting staff. It has a self-contained campus located on the outskirts of Jamshedpur on 341.3 acres of sprawling, rolling hilly, wooded land. It combines natural beauty of countryside with urban glamour of a mineral-rich industrial area in the state of Jharkhand. It surrounded by giant and medium scale industries and reputed Institutes.

About the Department

Department of Electronics and Communication Engineering was started in 1989. The department aims to be a national leader in imparting quality education, carrying out research and technology development. The department provides an outstanding research environment and offers academic program leading to the award of B.Tech., M.Tech. and Ph.D. degrees.

About ATAL Academy Guwahati

AICTE Training And Learning (ATAL) Academy, Guwahati was digitally announced with establishment of other three Academies in the country at Vadodara, Guwahati & Trivendram by MHRD, Government of India on 24.9.2018. Some of the objectives of ATAL being:

→To support technical institutions in fostering research innovation and entrepreneurship through training

→To stress upon empowering technical teachers & technicians using Information & Communication Technology

→To provide a variety of opportunities for training and exchange of experiences such as workshops, orientations, learning communities, peer mentoring and other faculty development programmes.

Email for communication: sttpiot19@gmail.com

Address for communication: Dr. Prashant Kumar,

SA-107, ECE Dept. NIT Jamshedpur-831014, Jharkhand

About the Short Term Programme (STTPIoT-19)

The Internet of Things is the concept of everyday objects - from industrial machines to wearable devices - using built-in sensors to gather data and take action on that data across a network. IoT is one of the thrust areas of ATAL Academies. This STTP on IoT is being organized by Department of ECE, NIT Jamshedpur in collaboration with ATAL Academy Guwahati.

On successful completion of the program all the participants will be awarded a Certificate of participation by ATAL Academy Guwahati.

This STTP is aimed at giving hands-on training to the faculty members and research scholars on various aspects of IoT. The STTP comprises a series of technical presentations and practical laboratory-based IoT projects. The projects will use the Arduino and other relevant IoT support technologies.

Resource Persons

The course content will be delivered from a pool of resource persons on the subject from leading industries and prestigious academic institutions.

Pedagogy

Lecture through audio-visual presentation, hands-on training, hardware demonstration and project implementation and evaluation.

Who can attend STTPIoT-19

Participation in this STTP is open to the faculty members and Research Scholars from **AICTE approved technical institutions** working on diverse fields of engineering such as IT, Electronics, Computer, Electrical, Biomedical, Biotechnology, Mechanical Engineering, etc. Some Post Graduate students from AICTE approved institutions may also be considered depending on vacancy.

Number of seats: 50

Registration Fees

There is no Registration fee from any participant.

Refreshment and Lunch will be provided to the participants free of cost. (No TA/DA will be paid to any participant.)

Accommodation

The participants may be provided accommodation in the institute hostels depending on the availability and on a nominal payment basis as per actual on first-cum-first serve basis. Accommodation can also be booked in nearby hotels directly or through prior information to organizers. No TA/DA will be paid to the participants

Last date for registration: 5-10-2019

Topics to be covered

1. Introduction to IoT

- What is Internet of Things?
- Background & Significance
- Developing & Implementing IoT Technologies
- IoT for Weather Monitoring
- Scope of IoT in Machine Learning
- Scope of IoT in Artificial Intelligence

2. Architecture of IoT

- Network Architecture of IoT
- Protocols

3. Introduction to Sensors

- Sensor Calibration
- Sensor Maintenance
- Sensor Deployment
- Powering options for Sensors

4. M2M Communication Protocols

- Sensor Network & Ad-hoc Network
- Wired & Wireless Networks
- Wi-Fi Standards

5. Cloud Computing Platform

- Cloud Architecture
- Concepts of Cloud Computing
- Role of Cloud Computing in IoT
- Deployment Models & Techniques

6. Node-MCU

- Features of Node-MCU
- Interfacing to outside world
- Programming Environment

7. Implementing IoT with Arduino

8. Introduction to Raspberry Pi with Python

9. Implementing IoT with Raspberry Pi.

10. Zigbee and IOT based systems

11. Antennas for IoT Applications

12. Hands-on Session-1

- Introduction to Arduino Platform
- Integration of sensors with Arduino
- Introduction to wireless modules

13. Hands-on Session-2

- Introduction to Node MCU
- Programming Node MCU with Arduino platform
- Sensor integration with Node MCU
- IoT development board

14. IoT Project Implementation