

## About MNIT

Malaviya National Institute of Technology (MNIT), Jaipur is one of the NITs established by Ministry of Human Resource Development, Government of India. The Institute, earlier known as MREC, was established in 1963 as a joint venture of the state and central Governments. Later in 2002, the college was given the status of National Institute of Technology and on August 15, 2007, proclaimed Institute of National Importance through Act of Parliament. MNIT campus spreads over 325 acres of lush green area in the prime location of Jaipur city. At present, in addition to research, consultancy and developmental activities, the Institute offers UG and PG (M. Tech./M.Sc. & Ph.D.) level courses to about 5000 students in almost all leading fields of engineering, technology, management and sciences.

## About the Departments

The **Electrical Engineering Department** is one of the oldest department of the institute which was established in the year 1963. At present the department offers both undergraduate and postgraduate courses in Electrical Engineering. The department has undertaken a number of research projects/schemes with the financial assistance from AICTE, DST and MHRD, including international collaborative research projects. Presently department is offering three M Tech programmes with specialization in Power Systems Engineering, Power Electronics and Power Systems Management.

The **Electronics & Communication Engineering Department** was started in 1984. Currently, the department offers undergraduate courses in ECE along with four postgraduate courses in VLSI Design, ECE, Wireless & Optical Communication, and Embedded Systems. The research domains of the department span over various related areas. The department continually provides collaborative opportunities with National/International Universities, resulting in a global exposure in research.

## About ATAL

ATAL is committed for development of quality technical education in the country by initiation various schemes.

## Patron

Prof. Udaykumar R Yaragatti, Director

## Program Coordinators

Prof. Rajesh Kumar, EED

Dr. Kuldeep Singh, ECE

Dr. R. K. Chaurasiya, ECE

## Address for Communication

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Malaviya National Institute of Technology Jaipur,  
J. L. N. Marg, Jaipur-302017, Rajasthan

## Venue & Accommodation

Jaipur is well connected by road, rail and air services. MNIT is situated on Jawaharlal Nehru (JLN) Marg and is about 9 kms from Main-railway station/Central Bus Stand (Sindhi Camp) of Jaipur and 6km away from the Airport. Limited accommodation is available in the MNIT Hostels for outstation participants on nominal charges at first come first serve basis.



Sponsored by:

AICTE Training and Learning Academy (ATAL) Programme,  
All India Council of Technical Education,  
New Delhi

**AICTE Sponsored**  
**One Week Workshop**

on

**Robotics and Computer  
Vision**

**16-20 December 2019**



**Jointly Organized by:**

**Dept. of EE & Dept. of ECE**

**Malaviya National Institute of Technology  
Jaipur 302017, Rajasthan India**

**www.mnit.ac.in**



**Registration Form  
AICTE Sponsored**

**One Week Workshop**  
on

**Robotics and Computer Vision**  
(16-20 December 2019)



Name .....

(In block letters)

Designation .....

Organization.....

Academic Qualification .....

Specialization .....

Mailing Address .....

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Mobile.....

E-mail.....

Date .....

Signature of Applicant

Signature of Sponsoring Authority with seal

**About the workshop**

This course is designed to provide an exposure to the fundamentals of Robotics and Computer Vision. Participants will learn kinematics and dynamics of industrial manipulators, kinematics of mobile robots, trajectory planning, path planning and control and how to embed intelligence in robotic tasks. Hands-on training and practice sessions will help participants gain confidence on robotic concepts, their simulation and implementation including sessions on intelligent agents.

The basics and applications of computer vision will also be dealt with. Application such as feature extraction and object detection will be implemented and executed using Python. Application of Deep learning in computer vision will be taught and a lab session will be dedicated for it. Recent Applications and future research directions will be discussed.

**Eligibility/Target Audience**

Participation in this workshop is open to the faculty members/PhD Scholars/PG Students of AICTE affiliated institutes. : Since the number of seats is limited to 50, the selection will be made on first cum first basis and intimation will be sent to the candidates by email. Certificates will be issued to the participants only after attending the complete course. No TA/DA will be paid to the participants.

**Resource persons**

Resource persons are experienced faculty members from MNIT Jaipur.

**Registration charges**

There are no registration charges to attend the program. I.e. it is FREE for selected participants.

**Course Content**

The major topics to be covered but not limited to are as follows:

1. **Introduction to Robotics and Robot Simulators.**
2. **Robotic Control: Position control, trajectory tracking, force control.**
3. **Sensors and Vision System.**
4. **Robot Hardware Implementation**
5. **Robot Actuation Systems.**
6. **Industrial Applications of Robotics.**
7. **Computer vision - Feature detection & object classification.**
8. **Computer vision using Python .**
9. **Deep Learning for Computer Vision with Hands-on.**
10. **Recent Applications and research directions.**

**Registration Link**

The registration for the workshop can be done through online link:

[https://docs.google.com/forms/d/e/1FAIpQLSeWOnoKGNJI18ah6CQEnztg30p6ysUH0aK7L2zZ-oGpal9\\_6g/viewform?vc=0&c=0&w=1](https://docs.google.com/forms/d/e/1FAIpQLSeWOnoKGNJI18ah6CQEnztg30p6ysUH0aK7L2zZ-oGpal9_6g/viewform?vc=0&c=0&w=1)