

## Expression of Interest (EOI)

### CERTIFICATE COURSE OF – 4 WEEKS (200 HRS)

on

## Advances in Robotics: Processes, Applications and Technology

### COURSE CONTENTS

**OBJECTIVES** The course is designed to impart knowledge and skills related to Robotics technologies, applications & types -equipment and to develop application in day to day life using integration with Digital manufacturing environment.

**LEARNING OUTCOMES: Robotics** is an interdisciplinary area of Mechanical, electronics and Electrical controls. After completion of this course, the students will be able to know about basics of Robots, their modelling, applications and modern methods of usages and processes in Various applications today.

### **DETAIL CONTENTS**

- Introduction to Robots and programming
- [Laboratory visits](#)
- Robot equipment, design and control process parameters, common faults and troubleshooting, process design & applications
- [Laboratory work -1](#)
- Kinematics and path planning of Robots
- [Laboratory work - 2](#)
- Application in developmental process & design issues
- [Laboratory work - 3](#)
- Modern application in 3D printing & entrepreneurship
- [Laboratory work - 4](#)
- [Advancement in Robotics & closure](#)

### **About Varanasi:**

The holy city of Varanasi is the oldest living city in the world which is also known as the Capital of the Spiritualistic world. The city has a great historical and cultural importance. This religious and cultural capital of India is situated at the bank of the holy river Ganges and is famous for temples of Lord Shiva, Buddha (Sarnath) and Sankat Mochan etc. Varanasi is the premiere & mostly place of oriental learning and simultaneously keeping pace with modern advanced knowledge. The vibrant city with its multiple dimensions of knowledge and liberation has a magnetic attraction for people all over the world.

### **About Institute:**

The Indian Institute of Technology (Banaras Hindu University) owes its existence to Mahamana Pandit Madan Mohan Malviya, Bharat Ratna-the founder of the first residential university of modern India, the Banaras Hindu University. The three of the erstwhile engineering colleges of BHU, namely BENCO, MINMET and TECHNO, were merged to form the Institute of Technology (IT-BHU) in 1968 to provide an integrated educational base. IT-BHU has been admitting students through the JEE conducted by the IIT's since 1972, and has been consistently ranked amongst the top few engineering institutions of the country. IT-BHU became IIT (BHU) in June 29, 2012 by an Act of Parliament. The Institute has maintained high academic standard since its inception. It has turned out luminary engineers and administrators who served the nation with great distinction. ME department is oldest one which started in 1919.

### **Patron:**

Prof. Amit Patra, Director  
Indian Institute of Technology (BHU) India

### **Course Coordinator:**

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