Two-Day Workshop on Introduction to Robotics

The department of Electrical Engineering is going to organize two-days consecutive workshops cum competition on "Introduction to Robotics" under the initiative of SSIP 2.0. The workshop aims to create the next generation of embedded systems engineers with a practical outlook to provide practical solutions to some of the real-world problems. The workshop will involve theory and hands-on-training sessions based on fundamentals of Robotics, advancements in Robotics research and educational platforms. Interdisciplinary learning: Robotics involves the integration of various disciplines such as computer science, electronics, and communication technology. Industry Relevance: Robotics is a rapidly growing field with wide-ranging applications across industries such as healthcare, agriculture, smart cities, manufacturing, etc. Overall, Robotics workshop play a crucial role in enhancing the educational experience of students by providing practical skills, fostering interdisciplinary learning, and preparing them for future leaders. In addition, this workshop helps students to think differently and implement the knowledge gained during this workshop for solving the various issues of society and providing them an opportunity to start their journey of entrepreneurship.

The workshop modalities are appended as:

1. Registration: Prior registration must participate in the workshop
2. Registered teams will participate in the Task Based Training (TBT) to be performed on Robo-kits, where teams will solve assigned, tasks designed to include hands-on experiments using the robot over a period of 2–3-months.
3. No substitution of team member will be allowed during TBT.
4. Laptop: All participants are requested to come with their laptop
5. Participation fees: There is no registration fee.
6. Participants number: A total of 24-participants in a team of 4-students (max 6- teams) will be trained.
7. No changes will be allowed after registration of the team.
8. All students having 100% attendance will be given a participation certificate (there is no provision for relaxation)
9. Awards: Attractive prize will be given to a top team after successfully completion of the workshop

Tentative Program Schedule (3rd -4th May 2024)	
Day 1: 03/05/2024 (Friday)	
08.30 am to 09.00 am	Reporting
09.00 am to 09.30 am	Introduction to Fire Bird V Robot
09.30 am to 09.45 am	Conversion (Binary to Decimal to Hexadecimal)
09.45 am to 10.15 am	Masking
10.15 am to 10.30 am	**Inauguration Session [Lightning of Lamp, Address by Provost, Vote of Thanks]**
10.30 am to 12.30 pm	Introduction to AVR Micro-controller and Programming Environment and Buzzer
12.30 pm to 01.15 pm	Lunch Break
01.15 pm to 03.30 pm	Simple Motion Control using I/O Ports

Day 2: 04/05/2024 (Saturday)	
8.30 am to 11.00 am	Robot Velocity Control using Pulse Width Modulation
11.00 am to 12.45 pm	Introduction to LCD Interfacing
12.45 pm to 01.30 pm	Lunch Break
01.00 pm to 02.00 pm	Analog Sensor Interfacing using Analog to Digital Conversion
02.00 pm to 2.20 pm	Tea Break
02.20 pm to 04.30 pm	Robot Programming for White Line Following
04.30 pm to 05.00 pm	Feedback & Valedictory

Coordinator:

Dr Alok Kumar Singh is the coordinator of the 2-days workshop, supported by the current ICT students Ashish and Priyanshi, and CSE students Heet, Om, Dharm, Aditya, Het, and Saurabh.

Contact for registration and queries:

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