

Two days Workshop

on

“Introduction to Robotics”

Organised by:

e-Yantra, IIT Bombay

at

MGM’S College of Engineering & Technology, Noida

(5- 6 February, 2016)

Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

A report on E- Yantra Workshop (IIT, Bombay)

On

“Introduction to Robotics”

(Held at MGM’S College of Engineering & Technology, Noida from 5- 6 February, 2016)

The following faculty members have attended the workshop:

1. Mr. Praveen Saraswat, Sr. Lecturer, ME Department
2. Mr. Manoj Kumar Sain, Reader, ME Department
3. Ms. Vinita Agrawal, Reader, ECE Department
4. Mr. Pallav Rawal, Lecturer, ECE Department

Day 1 (05/02/16) Friday

The workshop was started with registration and tea at 9 am. The inaugural ceremony started at 10 am with national anthem. Ms. Ashvini Deshmukh (workshop coordinator) welcomed all the participants. After that Prof. Krishana Lalla (IIT, Bombay) inaugurated the workshop through video conferencing. A team of three trainers from IIT Bombay, All HODs and Administrative officer presented during the inauguration ceremony.

After inauguration, session-I was started in which following topics were covered:

- I. Introduction to Fire Bird V robot
- II. Introduction to AVR Micro- controller and Programming environment

Mr. Sudeep Rajput and Mr Aditya Kumar were the instructors for this session.

After Lunch break, Session- II was started which covered following topics related to embedded C programming for interfacing the robot:

- I. Motion Control using I/O ports.
- II. Introduction to LCD interfacing

Mr. Aditya Kumar and Mr. Rama Krishana were instructors for this session.

Day 2 (06/02/16) Saturday

In the morning session, following topics were covered:

- I. Robot velocity control using pulse width modulation

II. Display of Data Array of eight elements on LCD

After Lunch, Session- II was started which covered following topics:

- I. Analog sensor interfacing using Analog to Digital Converter
- II. Robot programming for white line following

Mr. Sudeep Rajput, Mr. Aditya Kumar and Mr. Rama Krishana were instructors for sessions.

After tea, there was a quiz and feedback session, a robotic kit was provided to those colleges who have submitted the letter of intent then Ms. AshviniDeshmukh gave the vote of thanks.

The workshop ended with group photograph session.



IT Bombay - e-Yantra Lab Setup Initiative (eLSI): Invitation to Attend the Two Day Workshop at MGM's College of Engineering and Technology, Noida, UP --

From: e-Yantra Support

Sent: Thu, Jan 28, 2016 at 2:35 am

To: kumar.shashi651@gmail.com, abhishek11_soni@yahoo.co.in, sls@skit.ac.in

CC: ashvini@coet.in, vamshi@coet.in, Krishna Lala, e-Yantra Support

Respected Sir/Madam,

Greetings from e-Yantra!

e-Yantra announces the 2-day workshop on "Introduction to Robotics" for teacher teams from your region through the e-Yantra Lab Setup Initiative (eLSI).

The dates and venue are given below:

Date: February 5 and 6, 2016 (Friday & Saturday)
Venue: Computer Center,
MGM's College of Engineering and Technology,
A-09, Sector-62, NOIDA
Uttar Pradesh

Coordinator : Prof. Ashvini Deshmukh
Contact Number : +91-99715-07111
e-mail : ashvini@coet.in

There is no registration fee to participate in the workshop.

The registrations for the workshop are on the First Come First Serve (FCFS) basis. Kindly contact the Coordinator to confirm your participation for the workshop before February 2, 2016.

There are some colleges who have given the Letter of Intent (LoI). Such colleges are all confirmed to attend the workshop.

Those colleges who have not expressed their interest in the e-Yantra Lab Setup Initiative (eLSI) through a formal LoI can also depute a team of four teachers for the 2-day workshop.

Here are the modalities of the workshop:

1. No fee will be collected from any participant. Tea/Lunch will be provided on both the days of workshop.
2. All traveling and staying expenses of the team members attending the workshops are borne by their respective colleges.
3. Each participating college team member registers at the venue on the first day of workshop.
4. Teachers will be given a participation certificate from e-Yantra upon successful participation on both days of the workshop.
5. Teacher teams from colleges that have given LoI, who have successfully participated in both days of the workshop, will receive a robotic kit at the end of the workshop. These teams will participate in the Task Based Training (TBT).
6. Other teams will not be given a robotic kit unless their colleges also process the LoI.

What after the workshop?

1. Teams from colleges participating in eLSI by giving the LoI will participate in Task Based Training (TBT) to solve assigned tasks designed to include hands-on experiments using the robot, over a 3-4 month period. Teams participate in TBT online. No travel is required.
2. Colleges set up their labs during this 3-4 month period.
3. Certificates and 2 additional robotic kits are awarded to colleges at the end of TBT, during the

valedictory function when all the labs in the region are inaugurated simultaneously.

4. No substitution of team members will be allowed during TBT. Teachers who are trained through the 2-day workshop will participate in TBT.

Please click on below link to find the detailed schedule for the 2-day workshop:
Workshop Schedule

The format for the Letter of Intent (LoI) can be downloaded from the following link:
Letter of Intent

Two brief video tutorials on "**Embedded C Programming basics**", which will provide quick review for teachers before attending the workshop, is included in this mail.

These tutorials outline all the essential concepts which will aid the teachers to better understand the contents of the workshop. Please find their video links below:

Basics of Embedded C (part 1) : <https://youtu.be/yxq-xCq1Gg4>

Basics of Embedded C (part 2) : <https://youtu.be/k4fcKgiYsZk>

We look forward to meeting you and your team at the workshop.

Feel free to contact us at support@e-yantra.org should you have any query.

Best Wishes,

e-Yantra Team
IIT Bombay.

SKIT/2015/684

To
Principal Investigator
e-Yantra project
IIT Bombay

Date: 18/12/2015

Subject: Expressing intent to participate in e-Yantra Lab Setup Initiative (eLSI)

Dear Sir/Madam,

We understand that the MHRD funded e-Yantra project is facilitating setting up of Robotics labs at engineering colleges with the goal of spreading Embedded systems and Robotics education.

In order to achieve the desired impact, e-Yantra would provide necessary support in the following manner:

1. Conducting workshops for a team of 4 teachers identified by us
2. Training the team of teachers through hands-on experiments in a step-by-step manner through Task Based Training (TBT)
3. Providing support and advice to set up a robotics lab such that by the time the teachers are trained, a robotics lab is set up at our college

On our part, we express our intent to participate in this nation-building effort by committing the following resources:

1. Team of teachers:

Team leader:

MR. PRAVEEN SARASWAT

e-mail id of Team-leader

saraswat-54@yahoo.com

Team members:

Mr. Himanshu Singh Rathore

Ms. Vineeta Agarwal

Mr. Pallav Rawal

2. Funds to set-up a Robotics lab: 2L (Rs. 2L)

3. Creating a Robotics club for students to experiment with the robots

Sincerely,

S. L. Surana

Stamp:



Name: DR S.L. SURANA
Designation: DIRECTOR (Academics)
Phone: 919887444110
e-mail: sls@skit.ac.in