Way to VPM's MPCOE :

Jaigad

Ratnagiri to MPCOE

Tavsal

Jaigad (Feriboat)

Guhagar

VPMMPCOE
Velneshwar

Modakaghar

Ratnagiri

VPMMPCOE
Velneshwar

Chiplun to MPCOE

Chiplun

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Maharashtra - 415729, INDIA.

Tel. No. : 02359 - 205237 Mobile : 7057809801 Fax No. : 02359 - 243104

E-mail : mpcoe@vpmmpcoe.org   URL : www.vpmmpcoe.org

VPM's
# Maharshi Parshuram College of Engineering

MAHARSHI PARSHURAM COLLEGE OF ENGINEERING, VELNESHWAR
ESTD. 2012

✳ Velneshwar ✳

DEPARTMENT OF ELECTRICAL ENGINEERING

DTE CODE
EN 3462

Approved by
AICTE, New Delhi

Affiliated to
Mumbai University

CHOICE CODE
346229310

Key Features

★ Well equipped laboratories

★ Digital classrooms

★ Industrial visits & internships in COEP

★ ISTE " Institute Membership " & ISTE " Student Chapter "

★ Workshops based on recent trends

★ Project guidance & guest lectures from BARC experts
& reputed organizations

★ Wi-Fi campus

★ E-Library Facility
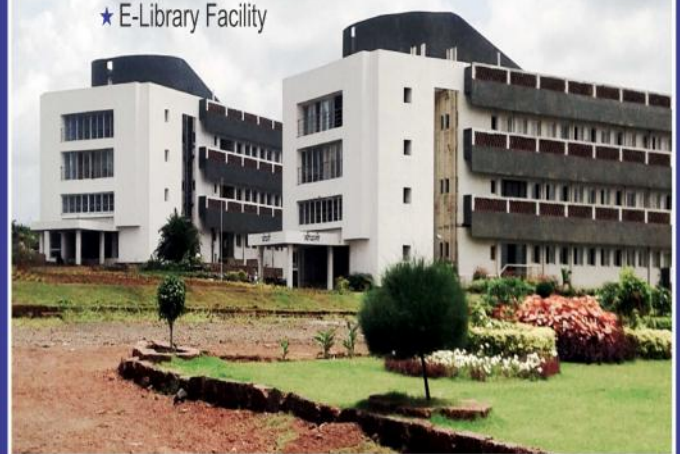
About Department:

This new age, the age of Technology, dawned with the discovery of Electricity and the subsequent development of Electrical Engineering equipped with modern infrastructure. The Electrical Department at VPM's MPCOE was set up in 2012. Students strength is around 140 along with 10 well qualified teaching staff. VPM's MPCOE understands the importance of Electrical Engineering and is fully capable of meeting the expectations of young aspiring Engineers. The Electrical Engineering Department emphasizes rigorous training in analytical and experimental techniques, effectively giving students an integrated approach and a thorough understanding of how to solve the problems and more importantly, equip them to face the challenges in Industry.

Faculty Members:

Mr. Satish Ghorpade
Head of Department

Mr. R. B. Bapat
Assistant Professor

Mr. Santoshkumar Hunachal
Assistant Professor

Mr. Shankar P.R.
Assistant Professor

Mr. Maheshkumar Kamad
Assistant Professor

Ms. Neha Agashe
Assistant Professor

Mr. Ratnadeep Keer
Teaching Assistant

Mrs. Priti Sathe-Bhole
Teaching Assistant

Mr. Yogesh Katdare
Teaching Assistant

Ms. Ramadevi Rudra
Teaching Assistant

Mr. Swapnil Mohite
Lab Assistant

Ms. Dhanashri Sawant
Lab Assistant

Guidelines to make Mobile Controlled ROBO Car

(A) Assembling the Hardware

STEP 1: Connect headphone jack to DTMF (**D**ual **T**one **M**ultiple **F**requency) module at IN and GND pins.

STEP 2: Connect a battery to the supply terminal shown on PCB as 5VDC.

STEP 3: Now connect ABCD pin of DTMF Module to the Pin no. 4, 3, 2 and 1 of Arduino respectively.

STEP 4: After connecting DTMF, connect Arduino UNO to the Motor driver module.

STEP 5: Take four male-male connecting wires and connect them from Pin no. 10, 11, 12 & 13 to the M1 IN and M2 IN.

STEP 6: After connecting Motor driver connect two motors at M1 OUT and M2 OUT.

STEP 7: Connect the same battery used in DTMF to the Arduino.

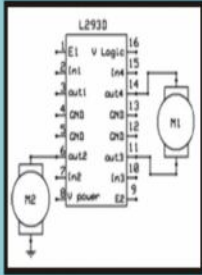STEP 8: Connect separate battery for the motor driver as power consumption by the motor will be more.

(B) Using Software

STEP 1: Now open the Arduino software and write your code.

STEP 2: While writing the code use the decoded DTMF outputs for each mobile press key.

STEP 3: Make a truth table for Button press,
    2 (for front movement),
    8 (for reverse movement),
    4 (for left movement),
    6 (for right movement).

STEP 4: Now refer the code given in CD-ROM.

STEP 5: Compile your program by using Arduino software.

STEP 6: If program is successfully compiled then upload the program using cable provided with the kit.

STEP 7: Now check the motor directions. If directions are not as per the mobile buttons then interchange the motor driver M1 IN and M2 IN Pins.

NOTE: (1) The headphone jack has three wires, one for left speaker, second for right speaker and third for ground. Wires of left speaker and right speaker have to be combined and should be soldered together.

(2) Two batteries should be used, one for the motor driver module and one for the Arduino and the DTMF module.

Automatic Mobile Controlled ROBO-CAR

Components and Specifications:

COMPONENT AND SPECIFICATION	DIAGRAM	DISCRIPTION
DTMF DECODER (8840)		**DTMF** (**D**ual **T**one **M**ulti **F**requency) is the signal to the phone company that generate when you press an ordinary telephone's touch key.
MOTOR DRIVER CKT (L293-D)		Dual H-bridge Motor Driver Integrated Circuit (IC) **L293D** is a typical Motor driver or Motor Driver IC which allows DC motor to drive on either direction. **L293D** is a 16-pin IC which can control a set of two DC motors simultaneously in any direction. It means that you can control two DC motors
AURDINO (ATMEL-16/32 BIT AVR)		**ARDUINO** is a computer hardware that can be used for designing and manufacturing micro controller kits for building digital devices and interactive objects that can sense and control objects in physical world.

Laboratories

Department has 10 well equipped laboratories along with updated softwares required for educational purpose.

Control System Lab

Drives and Control Lab

Protection Lab

Machine Lab

Project Lab

Simulation Lab

Expert Lectures :

- Guest lecturers from BARC, COEP, VJTI etc. such reputed organizations
- Final year project guidance from BARC Ex-Scientist.

➤ Session on Nuclear Energy delivered by
Padma Vibhushan Shri Dr. Anil Kakodkar

➤ Introductory session on "Electrical Machines" taken by **Dr. P. K. Katti , BATU, Lonere**

➤ Lecture on "Word formatting" delivered by **Dr. Narendra Gole, Ex-BARC**


➤ Final year project guidanc by **Dr. Shirish Agarkar & Dr. R .D. Kulkarni, BARC**

Results:

- The result of batch 2015-2016 is 100%.
- In first pass out batch more than 7 students secured above 9 CGPA and Mr. Vighnesh Wadye achieved first rank with 9.69.

Achievement:

- 12 students got opportunity to appear for robotics competition at IIT, Delhi
- Mr. Satish Ghorpade was awarded with Best faculty coordinator in Robo species workshop held in IIT Delhi.
- Mr.Rohit Tambe was awarded with Best student coordinator in Robo species workshop held in IIT Delhi.
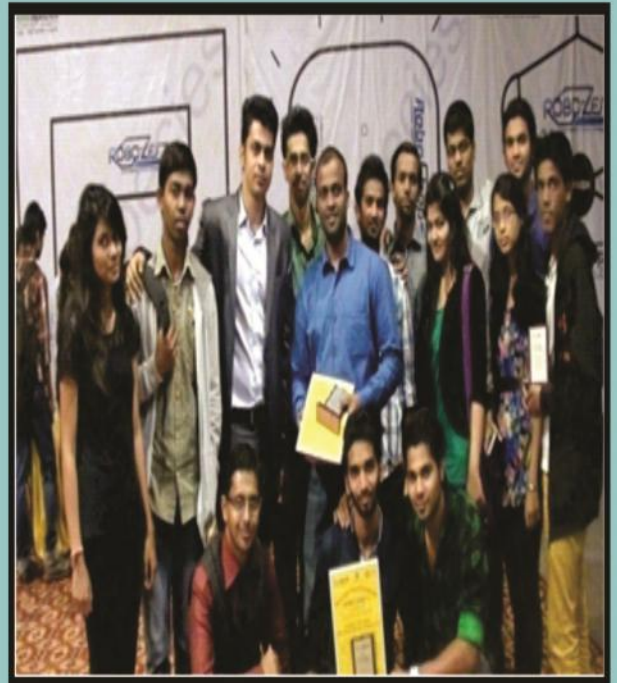
Ongoing Projects:

1. Automatic Drilling Machine using Depth Controllability

- It is ARDUINO based Drilling machine which controls the depth of drilling when object is placed.

2. RF based Remote control Home Appliances

- This project based on RF signal where one can control home appliances from 100 feet distance with any obstacle in between object and remote.

3. Eye Blink Detector for accident prevention

- Project based on detection of eye blinking while driving for accident prevention. In this, sensor is used which sense the blinking of eyes and accordingly preventive action will be taken.

Placement:

These are some of the students placed in well-known companies through campus drive

Ms.Shruti Tetambe
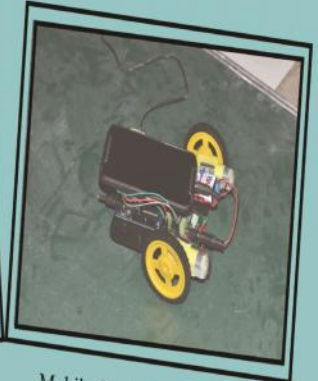CMS IT, Mumbai

Mr.Suraj Kadav
ROBOSPECIES, Delhi

Mr.Vinod Lavhate
ROBOSPECIES, Delhi

Workshops:

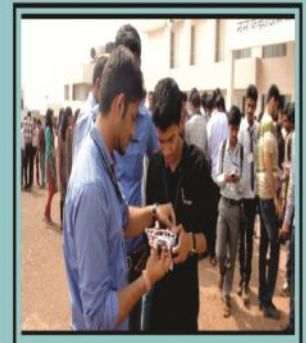Workshops based on recent trends have been conducted.

Mechtronics Workshop
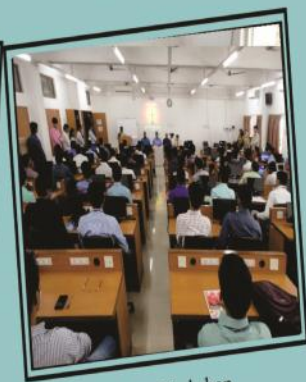

Mobile Controlled Robotics

Quad copter

Quad copter Workshop

Multidisciplinary Workshop

PLC Workshop

Industrial Visits

Lawkim's, Pune

VJTI, Matunga

Tarapur Atomic Power Station

COEP, Pune

BENN, Mumbai

Jindal Power Plant, Jaigad

Challenging Projects:

Pico Hydro Power Generation

➤ This project is conducted to develop a low cost and small scale power generation system using irrigation water and generated power can be utilized to household appliances in rural areas.

➤ The average power developed in the proposed system is 49.85 Watt. This system is efficiently capable of charging a 12 volt battery.

Power Generation By Low wind speed turbine

➤ Main objective is to developed small scale vertical axis wind turbine.

➤ Another objective is to make hybrid generation with solar

Smart E- Vehicle

➤ This project incorporates three different ways of charging lithium- ion battery: 230 wall socket, Pedal power, Regenerative braking

➤ It run with 60 Km/Hr when battery is fully charged

Smart Home Automation

➤ Home automation is GSM and ARDUINO based model which controls the electrical appliances with the help of relay driver