

1.2.1 Number of Add on /Certificate/Value added programs offered during the last five years

Institutional Programme Brochure/value added programs course modules

## Civil Engineering Department

AY : 2022-2023

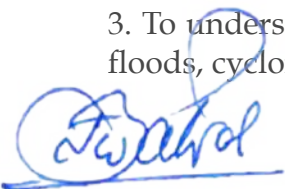
### Program Name: Free ISRO Sponsored Capacity Building in Space Based Disaster Management Support and Risk Reduction for Maharashtra State

PHCET has been fulfilling this objective by being an Outreach Network Institute with the support of the Indian Institute of Remote Sensing IIRS, Dehradun since July 2017. PHCET also under the umbrella of the Indian Society of Remote Sensing ISRS Mumbai Chapter conducts various seminars, workshops, space science fairs, etc. to inculcate awareness of choosing space science as their carrier. To date around 10,000 plus students have been taught for free at this IIRS Outreach Centre and about 100 plus courses in various domains like remote sensing, disaster management, GIS, GNSS, etc have been conducted. Many students after completion of these outreach courses have gone to IIRS for internship and have done various recent projects under the guidance of scientists of IIRS. This case study signifies that post rural school and college education, these young students have developed an interest in pursuing a future education in the field of space science.

The civil engineering department, in association with the Indian Space Research Organisation (Department of Space) Dehradun, organized space-based disaster management sponsored by the ISRO Disaster Management Support Programme (DMSP) for one week from 20 th March to 25 th March 2023 at Pillai HOC College of Engineering and Technology, Rasayani for 35 participants. All facilities for food, stay etc. will be provided.

The basics objectives:

1. To provide comprehensive knowledge and sensitize the learner's potential in Space Based Disaster Management (SBDM) - Preparedness, Mitigation, Response, and Recovery.
2. To provide information on various data sources and government initiatives.
3. To understand the science behind all disasters, focus more on major disasters such as floods, cyclones, droughts, etc., which occur quite frequently in Maharashtra State.



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4. To create community awareness and strengthen the framework of policies and institutional mechanisms for community mobilization and participation in Space Based Disaster Management (SBDM).
5. To identify various techniques, tools, datasets, and methodology using case studies and equip learners with advanced technology.
6. To analyze and understand the different regional, national, and international resources available on geospatial technologies that can be applied in disaster management (DM).
7. To identify and discuss various gaps in current disaster management methodologies, policies, and practices and work towards challenges that will help in Disaster Risk Reduction (DRR).

Outcomes :

1. To create a forum wherein views and ideas related to SBDM can be discussed, interchanged, and immediate support/ guidance can be provided if and when required.
2. The Consultation would serve as a milestone for further actions in enhancing the state and district-level capacities to prepare and update State and District level Disaster Management Programmes (DMPs).
3. Exchange of faculty, experts, and resources for future events.
4. Sharing of tools, datasets advanced technologies.



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Participants along with faculty of Civil Engineering Department



Closing Ceremony of the Program

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## Brochure:

### Mahatma Education Society

Mahatma Education Society (MES) completed its 50th year in the field of education in 2020. It is a pioneer in establishing and managing institutions in various streams of education. Mahatma Education Society was established in the year 1970 by a group of teachers to spread education for all. Society today has 48 institutions from pre-primary to post-graduation to research with over 30,000 students and over 2,500 teachers. The society manages several schools imparting instruction in S.S.C., C.B.S.E., I.G.C.S.E and I.B. programmes, Junior Colleges, Degree Colleges, Engineering Colleges, Architecture College, Management schools, Polytechnics and Teacher education programmes at different locations in Mumbai, Navi Mumbai and Rasayani (Raigad District). Most of the colleges are reaccredited 'A' Grade by NAAC and also accredited by NBA & other Government bodies.

### Pillai HOC College of Engineering and Technology (PHCET), Rasayani

Mahatma Education Society's Pillai HOC College of Engineering & Technology (PHCET), Rasayani was established in 2009 and is affiliated with the University of Mumbai and recognized by AICTE & DTE. In less than 10 years of span, PHCET is recognized as one of the premier institutions delivering professional courses in Engineering & Technology at the Undergraduate as well as Post Graduate levels. PHCET is accredited with an 'A' Grade by NAAC and also accredited by NBA (Mechanical & Computer Engineering) & other Government bodies.

Currently, PHCET offers the following courses-

- Civil Engineering (UG & PG)
- Computer Engineering (UG & PG)
- Electronics & Computer Science (UG)
- Electrical Engineering (UG)
- Information Technology (UG)
- Mechanical Engineering (UG & PG)
- Civil & Computer Engineering (Ph.D.)

### Programme Objectives

1. To provide comprehensive knowledge and sensitize the learner's potential in Space Based Disaster Management (SBDM) - Mitigation, Preparedness, Response, and Recovery.
2. To provide information on various space-based data sources and government initiatives.
3. To understand the science behind all disasters and focus more on space based disasters such as floods, cyclones, droughts, earthquakes, sea level rise, etc. which occur quite frequently in Maharashtra.
4. To create public awareness and strengthen the framework of policies and institutional mechanisms for community mobilization and participation in Space Based Disaster Management.
5. To identify various techniques, tools, datasets, and methodology using case studies and equip learners with advanced space-based technology.

### Programme Outcomes

- Understand the concept of Disaster Risk Assessment, Reduction and Management at global scenario
- Describe and utilize spatial data, geographic information systems (GIS) and remote sensing.
- Utilize existing sources of historical dataset.
- Utilize risk information in emergency preparedness planning.
- Visualize hazard and risk information.

### Who

### Can Apply?

Government officials and professionals educators, university students, and other stakeholders working in the field of disaster management.

### Important Information

**Last date of Registration** - 4<sup>th</sup> March, 2023  
**Date of Confirmation** - 6<sup>th</sup> March, 2023  
**Mode of conduct** - Offline  
**No of Seats** - 50  
**Registration Fees** - NIL



### ISRO Disaster Management Support (DMS) - Capacity Building (CB) Program

Under ISRO's Disaster Management Support (DMS) Programme has been actively supporting the Central and State governments by providing operational services during pre-disaster, during-disaster and post-disaster time-frames, including experimental forecasts, using space systems. Capacity Building (CB) in space technology for disaster management under ISRO DMS Programme has been identified as a key element to motivate the participants to develop innovative methods, tools, data products and services in the field of disaster management using space technology. DMS-CB program is one such unique effort funded by ISRO initiated to fulfil the CB requirements in the country.



*(Signature)*

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### PATRONS

**Dr. K. M. Vasudevan Pillai** (Hon. Chairman, MES)  
**Dr. Daphne Pillai** (Hon. Secretary, MES)  
**Dr. Priam Pillai** (Hon. COO, MES)  
**Mr. Pranav Pillai** (Hon. Dy. CEO, MES)  
**Dr. Lata Monon** (Dy. CEO, Rasayani Campus)  
**Dr. J.W. Bakal** (Principal, PHCET)

### CORE COMMITTEE

**Dr. Karthik Nagarajan**

**Convenor**

Associate Professor, Department of Civil Engineering, PHCET  
 Network Coordinator, IIRS ISRO Outreach Centre,  
 Secretary, ISRS Mumbai Chapter  
 Innovation Ambassador, Institute Innovation Council, MHRD  
 Mobile No: 8779 605 643, Email: id.knagarajan@mes.ac.in

**Prof. Raju Narwade**

**Co-Convenor**

Head of Department & Associate Professor  
 Department of Civil Engineering, PHCET  
 Treasurer, ISRS Mumbai Chapter  
 Innovation Ambassador, Institute Innovation Council, MHRD  
 Mobile No: 8108 20 21 22, Email: id.narwaderajp@mes.ac.in

### ORGANIZING COMMITTEE

**Dr. Amit Dasgupta**  
**Dr. G. R. Patil**  
**Ms. Manisha Jangade**  
**Mr. Manish Mane**  
**Ms. Apurva Deshpande**  
**Ms. Smitha J.S**  
**Mr. Chaitanya Khair**  
**Ms. Pradnya Rane**  
**Mr. Aniket Dumbre**  
**Mr. Arjan Deshmukh**

**Dr. Vinay Nikam**  
**Dr. Shilpa Kewate**  
**Ms. Madhulika Sinha**  
**Mr. Anwar Sayyed**  
**Ms. Ashwini P**  
**Mr. Shivraj Patil**  
**Ms. Swati Mhaskar**  
**Mr. Prashant Singh**  
**Mr. Haridk Panchal**  
**Mr. Shivaji Sarvade**



### Capacity Building in Space-Based Disaster Management Support and Risk Reduction for Maharashtra State (Basic Course)

Sponsored by



ISRO Disaster Management Support Programme (DMSP)

Dates for Programme

20<sup>th</sup> March - 25<sup>th</sup> March, 2023

Organized by

MAHATMA EDUCATION SOCIETY'S  
 PILLAI HOC COLLEGE OF ENGINEERING AND TECHNOLOGY  
 DEPARTMENT OF CIVIL ENGINEERING  
 Via Panvel, Rasayani, Taluka Khalapur, Rasayani  
 Website - www.phcet.ac.in  
 Contact No - +2152669000 / 01/02/03

AY : 2021-2022

**Program Name: Indian Institute of Remote Sensing Outreach Programme organized by Pillai HOC College of Engineering & Technology on Basic of RS, GIS & GNSS on 16th August**

**2021 - 26th November 2021**

The Basics of Remote sensing certification course will expose the topics like Thermal Remote Sensing, Earth Observation Sensors, Remote Sensing, Visual Image interpretation and more. The instructor also discussed topics like digital image processing techniques like image registration and rectification, along with image classification and enhancement techniques. Basics of Remote sensing, GIS & GNSS Technology and Their Applications training by Swayam will use free, open-source software to demonstrate and develop concepts throughout the course. Lastly, you will get a chance to earn a certificate by qualifying in the internal and final assessments.

**Brochure:**



The brochure features the IIRS logo at the top left, which includes the Hindi text 'इसरो' and 'IIRS'. The title 'Announcement Brochure' is centered, followed by 'IIRS Outreach Programme' in a larger font. Below this, the course topics are listed: 'Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System'. A note states: '\*There are limited number of seats. Registration will be done on first come first serve basis'. The dates 'August 16- November 26, 2021' are highlighted in a yellow box. The organizing institution is listed as 'Organised by Indian Institute of Remote Sensing, Indian Space Research Organisation, Department of Space, Govt. of India, Dehradun'. At the bottom, there is a photograph of a large, modern building with a central entrance and a blue signature over it.



This page provides detailed information about IIRS. It starts with the URL 'http://www.dlp.iirs.gov.in'. The 'About IIRS' section describes it as a premier Training and Educational Institute under the Department of Space, Government of India, established in 1966. It mentions its focus on developing professionals in Remote Sensing, Geoinformatics, and GNSS. The 'IIRS Outreach Programme' section states that it focuses on strengthening academia and user segments in Space Technology & its Applications using Online Learning Platforms. It lists two modes: 1. Live and Interactive classroom sessions (<https://eclass.iirs.gov.in/Join>) and 2. E-learning based online courses (<https://elearning.iirs.gov.in/>). The 'Live and Interactive classroom' section explains that the use of Remote Sensing, GIS, and GNSS is increasing rapidly, creating a demand for trained manpower. It lists the types of institutions that can participate: Central/State/Private Universities & Academic Institutions; Central & State Government Organisations/Departments; Research Institutes; Geospatial Industry; and NGOs. It concludes by stating that IIRS also conducts various theme-oriented online courses and webinars and provides the website 'https://www.iirs.gov.in/EDUSAT-News' for more details.

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### Course Announcement

IRS announces following courses commencing from **August 16, 2021**. The participants can register for either comprehensive course or individual modules (only five) of their choice.

#### Comprehensive Course:

- ◆ **Basics of Remote Sensing, GIS and GNSS (16/08/2021 to 26/11/2021):** Comprehensive course consisting of above five courses.

#### Modules:

- ◆ **Remote Sensing and Digital Image Analysis (16/08/2021 to 10/09/2021):** Basic Principles of Remote Sensing, Earth Observation Sensors and Platforms, Spectral Signature of different land cover features, Image Interpretation, Thermal & Microwave Remote Sensing, Digital Image Processing: Basic Concepts of Rectification and Registration, Enhancement, Classification and accuracy assessment techniques.
- ◆ **Global Navigation Satellite System (13/09/2021 to 24/09/2021):** Introduction to GPS and GNSS, receivers, processing methods, errors and accuracy.
- ◆ **Geographical Information System (27/09/2021 to 22/10/2021):** GIS, databases, topology, spatial analysis and open source software.
- ◆ **Basics of Geocomputation and Geoweb Services (25/10/2021 to 02/11/2021):** Geocomputation and Geoweb Services
- ◆ **RS and GIS Applications (08/11/2021 to 26/11/2021):** Agriculture and Soil, Forestry and Ecology, Geoscience and Geo-hazards, Marine and Atmospheric Sciences, Urban and Regional Studies and Water Resources.

#### Target Participants

- ◆ Undergraduate and Postgraduate (any year)
- ◆ Technical/ Scientific Staff of Central/ State Government/Faculty/researchers at university/institutions

#### Course Study Material

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through e-class. Video lectures will also be uploaded in IRS Learning management system (E-CLASS) <https://eclass.irs.gov.in/login>

#### Course Fee

There is no course fee

#### Course Registration

Course updates and other details will be available on URL- <http://www.irs.gov.in/EduSat-News/>. Participants can register through institute or also go for individual registration

#### For Participation through Institute/ Universities/Institutes/Department

- ◆ To participate in IRS Outreach programmes the interested organizations/ universities/ departments/ institutes has to identify a coordinator at their end. The identified coordinator will register online his/her institute as nodal center in IRS website.
- ◆ Participants has to register online through registration page by selecting his/her organization as nodal center
- ◆ The Coordinator is required to approve the participants from his/her institute for each course before programme commencement date.

#### For Individual Participation

- ◆ Participants can register using individual registration option also, if their institute not registered under IRS Outreach network (Indian Institute of Remote Sensing, Dehradun will be the nodal center)

#### Course Funding & Technical Support

The programme is sponsored by Indian Space Research Organization, Department of Space, Government of India.

### Number of seats:

Comprehensive Course: 10,000 seats  
Modules: 5,000 seats

The Nodal Center Coordinators will be provided with 25 seats in every course to register students of their institute

### Programme Reception

Programme can received live through E-CLASS platform of IRS-ISRO or using IRS youtube channel using internet connectivity. No specific hardware /software required. The content of the lessons will be available offline after 24 hours in the E-class portal.

#### Classroom Mode

- ◆ Required Hardware: Desktop computer with web camera microphone & output speaker or laptop with microphone camera and output speaker and Large display screen /projector/TV (Participating institutions have to bear total expenses for establishment of the classroom facility)
- ◆ The Nodal centre coordinator will be responsible for approval and marking attendance of the registered participants

#### Individual participants

- ◆ Individuals can attend the course live via any web browser through the eclass portal of IRS Dehradun i.e. <https://eclass.irs.gov.in> or via the YouTube channel of IRS i.e. <https://www.youtube.com/channel/UC8u8t2001>
- ◆ Participant can attend class through their personal smart phones, desktop or laptops (preferred for good resolution reception of programme)

### Important Links

Course updates, and other details will be available on URL- <https://www.irs.gov.in/EduSAT-News>

### Award of Certificate

Working Professional and Students: Based 70% attendance and 40 % passing marks

### Feedback Mechanism

The participants are required to submit their feedback online through IRS e-Learning portal. Feedbacks is critically analyzed and implemented in further courses. Selected participants and participating organization will be invited to attend annual IRS Academia Meet (IAM) at IRS Dehradun.



Outreach Programme Feedback Session during IRS Academia Meet (IAM)-2020



IRS received two national awards for excellence in training for outreach and e-learning programme by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).

#### Contact Details

IRS Dehradun Learning Centre  
Indian Institute of Remote Sensing, Indian Space Research Organisation  
Department of Space, Block-14, Hall-2, ISRO, Post, Dehradun-248001  
Phone: [05122610000](tel:05122610000), [05122610001](tel:05122610001)  
Website: [www.irs.gov.in](http://www.irs.gov.in) or [www.isro.gov.in](http://www.isro.gov.in)

## Course Syllabus:

## Course Schedule

S. No.	Course Name	Module Name	From	To
1.	Basic of RS, GIS & GNSS	Complete Basic Course	16-08-2021	26-11-2021
2.	Remote Sensing & Digital Image Analysis	Module-1	16-08-2021	10-09-2021
3.	Global Navigation Satellite System	Module-2	13-09-2021	24-09-2021
4.	Geographical Information System Module	Module-3	27-09-2021	22-10-2021
5.	Basics of Geocomputation and Geoweb Services	Module-4	25-10-2021	02-11-2021
6.	RS & GIS Applications	Module-5	08-11-2021	26-11-2021

AY : 2020-2021

## Remote Sensing Applications in Agricultural Water Management: August 03 - August 07, 2020

Agriculture has been a vital sector and back bone of Indian rural economy. In agriculture, water

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is a scarce and indispensable resource for the achieving food security, sustainable ecosystems as well as maintained hydrological cycle. The changes in land use have accelerated in recent years. The estimation of water for agricultural use needs to be updated frequently, which is time-consuming and cost ineffective with traditional field based techniques. In present context, Earth Observation (EO) satellites operated in optical/thermal and microwave domains with frequent revisit and improved spatial resolution providing periodic monitoring of crop information such as irrigated crop area, crop condition, phenology, evapotranspiration, water stress and soil moisture for informed decision making on water management. Furthermore, availability of new airborne sensors and unmanned aerial vehicle (UAV) supported earth observation and their combination with process based models/ground based instrumentation i.e. eddy flux tower, large aperture scintillometer, lysimeter, Bowen ratio energy balance etc. are facilitating the development of new data processing techniques as well as their integration to develop precision irrigation systems and geospatial crop water accounting.

## Brochure:

### IIRS Outreach Programme

The IIRS outreach programme, which was started in 2007 with 12 universities/ institutions has now grown substantially to 1800 network institutes. The beneficiaries of the programme may include:

- Central/ State/ Private Universities & Academic Institutions
- Central & State Government Departments
- ICAR Universities/ Institutes Professionals
- Agriculturists
- Research Institutes
- Geospatial Industries
- NGOs

### Feedback Mechanism

IIRS has conducted workshops and sessions during IIRS User Interaction Meet to take feedback from participating institutions to improve the quality of future courses.



Feedback session during IIRS User Interaction Meet (IIRUM)-2020

### Awards of Appreciation

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1<sup>st</sup> National Symposium on Excellence in Training conducted during April 11-12, 2015 in New Delhi by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).



### About IIRS

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department of Space, Govt. of India is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geoinformatics and GNSS Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IPI), founded in 1966, the Institute boasts to be the first of its kind in entire South-East Asia. While nurturing its primary endeavour to build capacity among the user community by training mid-career professionals, the Institute has enhanced its capability and evolved many training and education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

IIRS also conducts e-learning programme on Remote Sensing and Geo-information Science  
(<http://elearning.iirs.gov.in>).

### Contact Details

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Department of Space, Govt. of India,  
4-Kalidas Road, Dehradun  
Email: [dip@iirs.gov.in](mailto:dip@iirs.gov.in)

### 63<sup>rd</sup> IIRS Outreach Programme



### Remote Sensing Applications in Agricultural Water Management

August 03 – August 07, 2020



Organised by  
**Indian Institute of Remote Sensing**  
Indian Space Research Organisation  
Department of Space, Govt. of India  
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[www.iirs.gov.in](http://www.iirs.gov.in)

*Tiwari*

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## About the Course

Agriculture has been a vital sector and back bone of Indian rural economy. In agriculture, water is a scarce and indispensable resource for the achieving food security, sustainable ecosystems as well as maintained hydrological cycle. The changes in land use have accelerated in recent years. The estimation of water for agricultural use needs to be updated frequently, which is time-consuming and cost-ineffective with traditional field based techniques.

In present context, Earth Observation (EO) satellites operated in optical/thermal and microwave domains with frequent revisit and improved spatial resolution providing periodic monitoring of crop information such as irrigated crop area, crop condition, phenology, evapotranspiration, water stress and soil moisture for informed decision making on water management. Furthermore, availability of new airborne sensors and unmanned aerial vehicle (UAV) supported earth observation and their combination with process based models/ground based instrumentation i.e. eddy flux tower, large aperture scintillometer, lysimeter, Bowen ratio energy balance etc. are facilitating the development of new data processing techniques as well as their integration to develop precision irrigation systems and geospatial crop water accounting.

## Course Contents

- Concept and fundamentals of agricultural water management & role of EO in water management
- Remote sensing of irrigated crop area mapping and irrigation crop water requirement
- Remote sensing of regional crop evapotranspiration estimation
- Satellite remote sensing of soil moisture and global products
- UAV and advanced remote sensing for agricultural water management

## Target Participants

- This course is designed for professionals from Central / State Govt. / Private Organizations / NGO/ students & researchers engaged in water management aspects of agriculture.
- The course participants have to be duly sponsored by their university/ institution and application should be forwarded through coordinators from respective Organisations/ Centres. Users attending programmes under CEC-UGC / CIET / other networks can also participate. Institutions on high speed National Knowledge Network (NKN) can also participate.

## Course Study Material

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through e-class. Video lectures will also be uploaded on e-class (<https://www.eclass.iirs.gov.in/login>).

## Course Fee

There is no course fee for attending this programme.

## Course Registration

- Course updates and other details will be available on URL- <http://www.iirs.gov.in/Edusat-News/>
- To participate in this programme the interested organizations/ universities/ departments/ Institutes has to identify a coordinator at their end. The identified coordinator will register online his/her Institute as nodal center in IIRS website.
- All the participants have to register online through registration page by selecting his/her organization as nodal center.

## Course Funding & Technical Support

The programme is sponsored by National Natural Resources Management System – Standing Committee on Training and Education (SC-T), Indian Space Research Organisation, Department of Space, Government of India.

## Programme Reception

Programme can be received through e-class platform of IIRS-ISRO using internet connectivity. No specific hardware/software required. However, it is recommended good internet connectivity at user end. To run the programme in class room, following hardware will be required:

- Desktop computer with web camera microphone and output speakers or laptop with microphone camera and output speaker.
- Large display screen/projector/TV.

## Important links

Courses updates and other details will be available on URL – <https://www.iirs.gov.in/EDUSAT-News>

To participate in this programme the interested organisations/universities/departments/institutes have to identify coordinator at their end. The identified coordinator will register online his/her institute as nodal Centre in IIRS website

(<https://elearning.iirs.gov.in/edusatregistration/coordinator>)

All the participants have to register online through registration page by selecting his/her organization as nodal Centre.

<https://elearning.iirs.gov.in/edusatregistration/student>

## Award of Certificate

Working Professionals and Students: Based on 70% attendance and 40% in the online examination

**There are limited number of seats.**

**Registration will be done on first come first serve basis**

## Course Syllabus:



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Date	Lecture	Topic of the lecture	Faculty
Aug 03, 2020	L1	Concept and fundamentals of agricultural water management & role of EO in water management	NRP
Aug 04, 2020	L2	Remote sensing of irrigated crop area mapping and irrigation crop water requirement	AD
Aug 05, 2020	L3	Remote sensing of regional crop evapotranspiration estimation	AD
Aug 06, 2020	L4	Satellite remote sensing of soil moisture and global products	NRP
Aug 07, 2020	L5	UAV and advanced remote sensing for agricultural water management	NRP
Aug 07, 2020	Panel discussion		Course Faculty

**AY : 2019-2020**

**Short Term Training Programme on "Post Covid Challenges in Infrastructural and Environmental Engineering "organized by Civil Dept,Pillai HOC Collge of Engineering & Technology on June 8- 12, 2020**

In commemoration of Golden Jubilee year of Mahatma Education Society, Department of Civil Engineering in association with Indian Society of Remote Sensing, Mumbai Chapter, Association of Structural Rehabilitation, Mumbai Chapter and Institution of Engineers, India, Belapur local chapter conducted a Short-Term Training Program on Post Covid Challenges in Infrastructural and Environmental Engineering from 8th June to 11 June 2020. Eminent speakers from academic, various field of civil and construction industry delivered their lecture. Effect of Covid-19 pandemic on construction industry were discussed. More than 500 participants from all over India registered. The sessions were conducted by eminent speakers through google meet and there was live streaming through YouTube. The registration link is as follows <https://forms.gle/WMyFtU6UhitTanJL8>. The link was shared with students and faculty all over India and the total registration for the program was slightly less than 500. Link for each session was shared with registered participants via mail and WhatsApp group. Participants provided their feedback everyday through the link shared with them. Certificate was awarded to all participants who attended the sessions and gave feedback.

The online STTP was organised with the following objectives:

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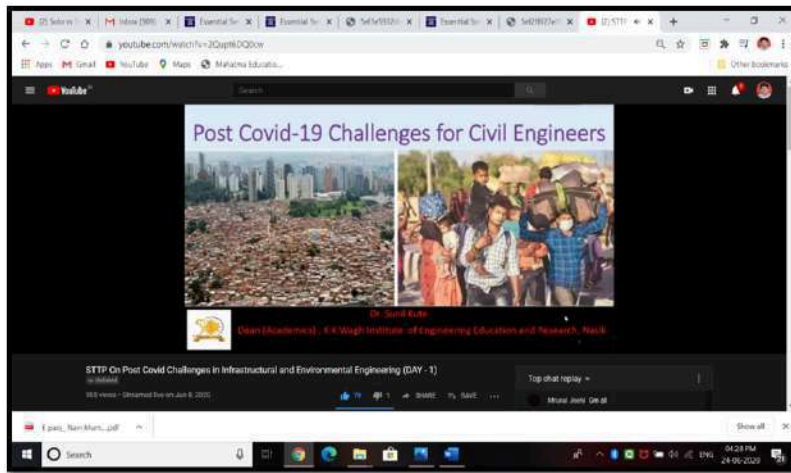
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To enhance the knowledge of students and faculty in the field of infrastructure development and environmental engineering.

To prepare the participants to overcome the challenges of unforeseen situations of lockdown and covid 19 pandemic.

To judiciously utilise the time during the lockdown for gaining knowledge.



Speaker giving details on challenges facing by the society during Covid

**Brochure:**

**About PHCET:** Pillai HOC College of Engineering and Technology (PHCET) is affiliated to University of Mumbai, approved by AICTE, DTE and Re-accredited by National Board of Accreditation (NBA) for Computer and Mechanical Engineering also accredited with an 'A' Grade by the National Assessment & Accreditation Council (NAAC) of India. PHCET is winner of the first position for Workplace Safety Award and Indian Merchant Chamber's Ramakrishna Bajaj National Quality Assurance Performance Excellence Trophy in Education Category - 2019.

**Courses offered by PHCET:**  
 Automobile Engineering (UG)  
 Civil Engineering (UG & PG)  
 Computer Engineering (UG & PG)  
 Electronics & Telecommunication (UG & PG)  
 Electrical Engineering (UG)  
 Information Technology (UG & PG)  
 Mechanical Engineering (UG & PG)  
 Ph.D. in Civil & Computer Engineering

**Registration details:**  
 Get yourself registered using the link given below:  
<https://forms.gle/WMyFt16t1itTanJL8>

**No Registration Fees**  
 All registered participants will receive session details (Google Meet Link) by email  
 Login 10 minutes before the session start.  
 E- certification will be provided to those who satisfy attendance criteria (Minimum 75 per cent)  
 Attendance will be monitored

**In commemoration of Golden Jubilee year of Mahatma Education Society**  
**Pillai HOC College of Engineering and Technology**  
 Department of Civil Engineering  
 Organises  
**One Week Online Short-Term Training Program**  
 On  
**"Post Covid Challenges in Infrastructural and Environmental Engineering"**  
 8<sup>th</sup> June -12<sup>th</sup> June 2020  
 In Association with

**Speakers**

<b>Prof. Dr. Sunil Kute</b> Dean (Academics), K. K. Wagh Institute of Engineering Education and Research, Nashik <b>Topic: Post Covid Challenges for Civil Engineers</b>	<b>Mr. Vikas Ramgude</b> Superintending Engineer, Design Circle, Public Works Department, Konkan Bhavan, Belapur <b>Topic: Recent Trends in Bridge Construction</b>
<b>Mr. Prejith P.</b> Assistant General Manager -Design Dilip Buildcon (Indore Metro Project) <b>Topic: Design Aspects of Metro and Monorail Projects</b>	<b>Dr. Rajesh Gujar</b> Assistant Professor, Pandit Deendayal Petroleum University, Gandhii Nagar, Gujarat <b>Topic: Artificial Intelligence for Civil Engineers: An overview</b>
<b>Mr. Suyash Mandal</b> PhD Research Scholar, Queens Land University, Brisbane, Australia <b>Topic: Advances in Anaerobic Digestion of Waste Water Sludge and Solid Waste</b>	

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 Dr. K. M. Vasudevan Pillai (Hon'ble Chairman, MES)  
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 Mr. Pranav Pillai (Hon'ble Dy. CEO, MES)  
 Dr. Lata Menon (Dy. CEO, Rassyani Campus)  
 Dr. Madhumita Chatterjee (Principal, PHCET)

**CONVENER**  
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 HoD  
 (Department of Civil Engineering)  
 (M) +91-810 820 21 22  
[narwade@mes.ac.in](mailto:narwade@mes.ac.in)

**CO-ORDINATOR**  
 Ms. Smitha J S  
 (M) +91- 8097534247  
[smitha@mes.ac.in](mailto:smitha@mes.ac.in)

**ORGANIZING COMMITTEE**

Dr. Vinay Nikam Dr. Shilpa Kewate Ms. Madhulika Sinha Mr. Anwar Sayyed Ms. Sonali Baviskar Ms. Apurva Deshpande Ms. Steffi Stephen	Dr. Amit Dasgupta Mr. Karthik Nagarajan Ms. Manisha Jangade Mr. Sandeep Gujar Mr. Manish Mane Mr. Harshal Pathak Ms. Ashwini P Ms. Gayatri Deshpande
--	---

*Signature*  
**Course Syllabus:**

**PRINCIPAL**  
 Mahatma Education Society's  
 Pillai HOC College of  
 Engineering and Technology,  
 Pillai's HOC Educational Campus  
 Rassyani, Tal. Khelapur  
 Dist. Raigad, Pin-410 207

**Schedule for Short Term Training Program – 8<sup>th</sup> to 12<sup>th</sup> June 2020**

Sr. No.	Date	Time	Speaker	Topic
1	08.06.2020	11.00 to 11.30 am	Inaugural function	
2	08.06.2020	11.30 am to 1.00 pm	Prof. Dr. Sunil Kute Dean (Academics) K.K.Wagh Institute of Engg. Education and Research, Nashik	Post Covid Challenges for Civil Engineers
3	09.06.2020	11.30 am to 1.00 pm	Mr. Vikas Ramgude Superintending Engineer, Public Works Department	Recent Trends in Bridge Construction
4	10.06.2020	11.30 am to 1.00 pm	Mr. Prejith P. Assistant General Manager - Design, Dilip Buildcon, Indore Metro Project	Design Aspects of Metro and Monorail Projects
5	11.06.2020	11.30 am to 1.00 pm	Dr. Rajesh Gujar Assistant Professor, Pandit Deendayal Petroleum University, Gujrat	Artificial Intelligence for Civil Engineers: An Overview
6	11.06.2020	2.00 to 3.30 pm	Prof. Dr. S. Ganapathy Venkatasubramanian, PROFESSOR, Anna University	Environmental Management and Law
7	12.06.2020	11.30 am to 1.00 pm	Mr. Suyash Mandal PhD Research Scholar, Queens Land University, Brisbane, Australia	Advances in Anaerobic Digestion of Waste water Sludge and Solid Waste
8	12.06.2020	1.00 - 1.30	Valedictory Function	

**AY : 2018-2019**

### **Advances in Disaster Management and Risk Reduction - A Remote Sensing and GIS Approach**

An STTP on 'Advances in Disaster Management and Risk Reduction - A Remote Sensing and GIS Approach' was conducted on 24<sup>th</sup> June 2019- 29<sup>th</sup> June 2019 by Department of Civil engineering. Disaster means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.

#### **Course Objectives**

1. Provide comprehensive knowledge to the learners on Disaster Preparedness, Mitigation & rehabilitation
2. Enable the learner to carry out risk assessment & vulnerability analysis
3. Generate community awareness & strengthen institutional mechanism for community mobilization & participation in Disaster Management

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### About STTP

Disaster means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of property; or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area (definition according to Disaster Management Act 2005, Government of India)



### Course Objectives

1. Provide comprehensive knowledge to the learners on Disaster Preparedness, Mitigation & rehabilitation
2. Enable the learner to carry out risk assessment & vulnerability analysis
3. Generate community awareness & strengthen institutional mechanism for community mobilization & participation in Disaster Management
4. Develop communication skills for Disaster Preparedness Create greater awareness about effective Disaster in various emergency situations
5. Equip learners with tools for meeting emergency medical requirement.

### Course Content

1. Physics and various types of disasters occurring around the world
2. Extent and damaging capacity of a disaster
3. Study and understand the means of losses and methods to overcome /minimize it.
4. Role of individual and various organizations during and after disaster
5. Application of GIS in the field of disaster management
6. Emergency government response structures before, during and after disaster.
7. Early warning and vulnerability assessment for natural disasters in India



### ADVISORY COMMITTEE

- Dr. S. K. Ukarande**  
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- Dr. Prakash Chauhan**  
( Director, IIRS - ISRO )
- Dr. Somer Saran**  
Scientist/Engineer - SF IIRS - ISRO )
- Dr. Sandeep Joshi**  
(Principal, PCE, Pune)
- Prof. Amar Munge**  
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(Chief Engineer , CIDCO)
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(Principal, FATE, Vashi)
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(Principal, TCET,Kandivali)
- Dr. R. B. Magar**  
Prof. & HoD, AIKTC, Pune)
- Dr. Rajendrakumar V.Saraf**  
(Chairman , Viraj Envirozing India Pvt.Ltd)
- Dr. B. R. Patil**  
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- Dr. Manjusha Deshmukh**  
(Principal, SCOE, Kharghar)
- Dr. G.R.Reddy**  
(Outstanding Scientist HARC,Mumbai )
- Dr. Gopal Ray**  
(G.S. ASTR & M.D Dharendra Group)

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- Mr. Franav Pillai** (Hon. Dy. CEO, MES)
- Dr. Lata Menon** (Dy. CEO, Rasayani Campus)
- Dr. Madhumita Chatterjee** (Principal, PHCET)

### CONVENER

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[rnarwade@mes.ac.in](mailto:rnarwade@mes.ac.in)

### ORGANIZING COMMITTEE

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Ms. Manisha Jangade  
Ms. Sonali Baviskar  
Ms. Madhulika Sinha  
Mr. Anwar Sayyed  
Ms. Apurva Deshpande  
Mr. Mahesh Singh  
Ms. Steffi Stephen  
Mr. Manish Mane

Dr. Amit Das Gupta  
Dr. Shilpa Kewate  
Ms. Ashwini P  
Mr. Harshal Pathak  
Ms. Gayatri Deshpande  
Mr. Sandeep Gujjar  
Ms. Arya Pillai  
Ms. Smritha J.S.  
Ms. Pooanam Patil



Feel free to Whatsapp for any details :  
Mr.Karthik : 8779 605 643 Mr.Raju : 810 820 21 22

**PRINCIPAL**

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### Registration details

Category	Fees
First 25 Registrations ( Special discount )	Rs.1000 /-
Industry & Others	Rs.1800 /-
ISTE , ISRS , IEF , ASTR Life members	Rs.1500 /-
Faculty	Rs.1200 /-
Research Scholars ,PG & UG Students	Rs.1000 /-

- Fill your Registration details in this link ( **Mandatory** ) : <https://forms.gle/pVuoF5Tsl4IVS&RA>  
Note: Kindly provide us the UTR number during registration
- Eminent Speakers from ISRO, MCGM, BMC, CIDCO, and IITs etc and other government organisations will deliver lectures and discuss recent case studies involved in management and mitigation measures on various disasters.



### Free Courses Offer from Pillai ISRO Outreach Network Institute



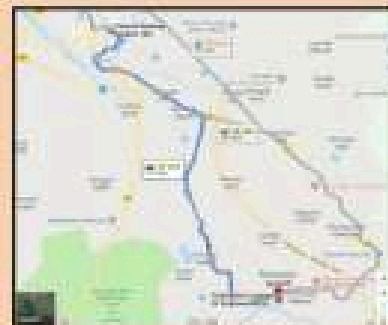
- Two free courses to all the registered participants on

Sr.No	Course Name	Dates	Duration
1	Advances in Remote Sensing and geospatial technologies for Disaster early warning, monitoring and mitigation	June 10- 21, 2019	2 weeks
2	Basics of "Remote Sensing, Geographical Information System and Global Navigation Satellite System	Aug 19 – Nov 15, 2019	13 weeks

- These courses will be taught by eminent scientist from ISRO . Indian Space research Organisation and we will provide you free notes in the form of pdf/ videos etc . At the completion of the above course an online examination will be conducted by Indian Institute of Remote Sensing ( all objective type based of the given syllabus ) and on successful completion of the course a Completion Certificate will be provided by IIRS , ISRO.
- **Keynote Speaker : Mr. Mahesh Narvekar , Director (Disaster Management), MCGM, Mumbai**  
**Grab this offer soon.....!!!! Limited Seats , First come First served ... !!!**

### Who Should Attend?

- Ph.D. research scholars
- Faculty-Engineering, Polytechnic, Architecture and Management Institutions
- Technical/ Scientific Staff of Central/ State Government/Faculty/researchers.
- Delegates from Industries and R & D Organizations.
- Geographers, Geologists & Environmentalist.
- U.G, P.G. Students ( Specially Students of Mumbai University who are having this subject in their current Syllabus )



### Google Map:

<https://maps.app.goo.gl/7VgqieShAQIReyv8>

### STTP schedule

Date: **June 24-29, 2019** .Time: **9.30 am - 4.30 pm**

Detailed schedule of lectures will be emailed

### Transport

Buses from CIDCO Circle near Panvel Railway station will start at 8:20 am

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## Course Syllabus:

Schedule: List of Eminent Speakers with Seminar Topics				
Theme	Time	List of Speakers	Designation	Seminar Topic
<b>Day 1 - 24th June 2019 ( Monday )</b>				
Risk of Disaster Management and its Prevention	08:30 - 10:00	Registration and Breakfast		
	10:00 - 10:30	Inaugural Function		
	10:30 - 12:00	Mr. Mahesh Narvekar	Director, Disaster Management Unit , MCGM Mumbai, Maharashtra, India	Keynote Speaker : A Talk on MCGM Disaster Management Activities
	12:00 - 01:00	Dr. Balaramrao Gera	Chairman , Centre for Geoinformatics , Jansati Tata School of Disaster Studies , School of Research Methodology	A Talk on : Institutional Framework for Disaster Management in India
	02:00 - 03:00	Dr. P.K.Champati Ray	Group Head , Geoscientia and Disaster Management Studies Group , IIRS , Indian Space Research Organisation , Dehradun	A 360 degree Understanding about Disaster Management
	03:00 - 04:00	Dr. Rajendrakumar Saraf	Former Editor , Indian Water Works Association	A Talk on : Safety, Risk and Mitigation in water and waste water management
	04:00 - 05:00	Mumbai University Faculty	Orientation Programme	Disaster Management and Mitigation Measures ( ILOEC / Institute Level Optional Course )
<b>Day 2 - 25th June 2019 ( Tuesday )</b>				
Safety and Disaster Change Impact ( ILOEC )	10:00 - 12:00	Dr. R.V.Sharma	Dy. Director (Retd) , Indian Meteorological Department	Dy. Director , (Retd) , A Talk on : Natural Disaster , Cyclone warning in India
	12:00 - 01:00	Mr. Rajendra Lokhande	BMC Officer , Urbanamambhat Municipal Corporation (BMC)	Talk on : Disaster Preparedness and Safety Precautions
	02:00 - 03:00	Dr. Arijit Ray	Scientist/Engineer - SP , Forestry and Ecology Dept. , IIRS- ISRO , Dept. Of Space , Dehradun	A Talk on : Forest Fire Monitoring and Risk Assessment
	03:00 - 04:30	Dr. R.V.Sharma	Dy. Director (Retd) , Indian Meteorological Department	Talk on : Climate Change / global warming impact
<b>Day 3 - 26th June 2019 ( Wednesday )</b>				
ISRO / ILOEC Workshop	10:00 - 04:30	LIVE Workshop	Many Eminent Speakers from ISRO	A Full Day LIVE Workshop from IIRS ISRO on Satellite data access from online data repositories and ISRO Bhuvan geoportal.
<b>Day 4 - 27th June 2019 ( Thursday )</b>				
Application of ILOEC in Disaster Management ( ILOEC )	10:00 - 12:00	Mr. Karthik Nagarajan	Asst. Prof. PHCET , Raseenyani	Role of ISRO Outreach Centre for learning Disaster Management and its Application through Remote Sensing and GIS
	02:00 - 03:00	Shri. C.M. Bharti	Scientist/Engineer-SP, Disaster Management Studies Dept. Dept. , IIRS-ISRO, Dept. Of Space , Dehradun	Talk on : Flood Hazard and Risk Assessment Management
	03:30 - 04:30	Mr. Raju Narwade	Asst. Prof. PHCET , Raseenyani	Natural and Man Made Disaster and its Impact
<b>Day 5 - 28th June 2019 ( Friday )</b>				
Space Technology & Satellite Navigation	10:00 - 12:00	Dr. Vinay Nikam	Professor , PHCET , Raseenyani	Flood Monitoring
	12:00 - 01:30	Dr. Y.S. Patel	Professor , SSCOE , Anantnag	Disaster Management Case Studies
	02:15 - 03:00	Pillai ISRO Outreach Network Institute ( Lab Visit )		
	03:30 - 04:45	Pillai ISRO Outreach Network Institute ( Lab Visit )		
<b>Day 6 - 29th June 2019 ( Saturday )</b>				
Research on Emerging and Old Disasters	10:00 - 12:00	Dr. Meetha Kulkarni	Head, P.G Dept, Sophia Girls' College, Anantnag	Disaster Management - Policy and Administration
	12:00 - 01:30	Prof. Prakash Kulkarni	Dept of Geography, Mari Basantnagar College, BEED	Financing Relief Measures : Disaster Management
	02:15 - 03:00	Valedictory Function		
	03:30 - 04:45	Valedictory Function		
Timings - Breakfast - 09:30 to 09:50 am / Lunch - 01:30pm to 02:15pm				
For Registration Contact : ( Feel Free to Whatsapp at 8779 605 643- Karthik N & 8108 20 21 22 - Raju Narwade) WebSite : <a href="http://www.phcet.com">www.phcet.com</a>				
Accommodation and Bus Facility ( Inform in Advance ) - Registration Dates extended till 23rd June 2019				
Thanks for making this event successful - Civil Department Team , PHCET				




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## Information Technology

### 1. AY 2022-23:

#### Hands On Workshop on Django

### PILLAI HOC COLLEGE OF ENGINEERING AND TECHNOLOGY, RASAYANI



DEPARTMENT OF INFORMATION TECHNOLOGY

---

#### HANDS ON WORKSHOP ON DJANGO

To Train tech-minded students Department of Information Technology has successfully conducted Hands On Workshop on Django. The event was conducted on 22/09/2022 and 23/09/2022 in the lab D-312 between . On this momentous occasion it was our proud privilege that we were blessed with Mr. Harshad Dagade as a speaker.

The event began with the formal introduction of guest speakers. To express our affection and reverence towards our guests Principal of PHCET Dr. J.W. Bakal and IT Department HOD Dr. Divya Chirayil felicitate the guest.



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After that Principal of PHCET Dr. Bakal sir addresses all the participated students and motivate them to study a lot and brighten their future.



*Dr. Bakal*

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Workshop started with some basic operations of Python and installation of Django module.



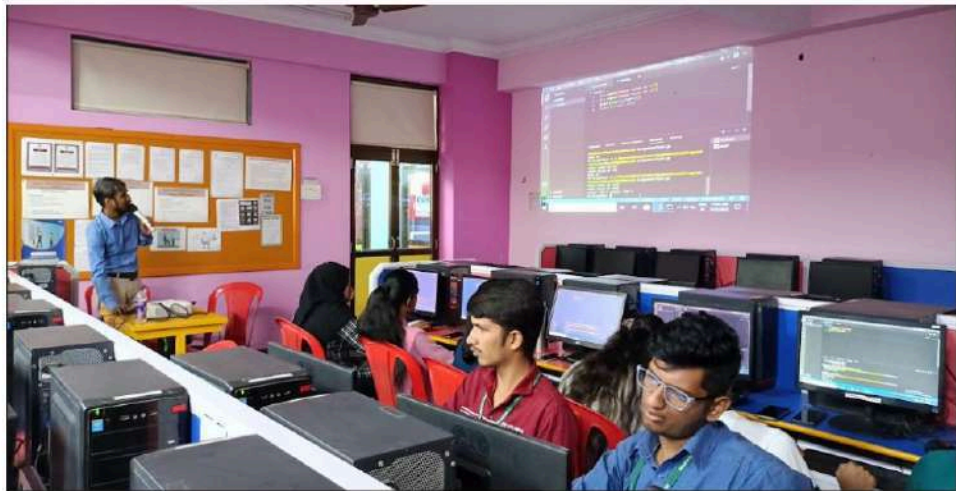
After all the required prerequisites and necessary basic operation related to Python they started with all advanced operations of Django.

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Students enthusiastically asked all their doubts which were running in their minds while performing the Hands On Practice and all this doubts were cleared at the same time by the professionals.



*T. J. J. J.*

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The event was led and executed successfully under the guidance of event Co-ordinator Prof. Rupali Sathe and Prof. Poonam Lad. About 40 students of Information Technology departments willingly participated in this event to make this event successful. All the participated were awarded with workshop completion certificates.



*Prasad*

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## Brochure of STTP



**DEPARTMENT OF  
COMPUTER ENGINEERING  
AND INFORMATION TECHNOLOGY  
ORGANIZES**

**ONE WEEK  
ISTE APPROVED**

**SHORT TERM TRAINING PROGRAM  
ON**

**"Insights of Data Science  
and Machine Learning with  
its Applications"**



**Mahatma Education Society's  
Pillai HOC College of Engineering and  
Technology, Rasayani**

Accredited with an 'A' grade by NAAC in the First Cycle 2019  
Reaccredited by NBA for Computer and Mechanical Engineering 2020  
Winner of the First Position for Workplace Safety Awards 2019  
Winner of Indian Merchant Chamber's Ramakrishna Bajaj National Quality Performance Excellence Trophy - 2019

---

**Session Date**  
Mon 4th July, 2022 - Sat 9th  
July 2022

**Session Timing**  
10:30 A.M. TO 4:30 P.M.

**Certificate**  
Registered participant will  
receive certificates during the  
valedictory function on the last  
day subject to attendance.

**For Registration & Enquiry:**  
Prof. Shamna Sadanand  
9167741331  
Prof. Akanksha Patil-  
7387963369

**PATRONS**

Dr. K. M. Vasudevan Pillai, Chairman, MES  
Dr. Daphne Pillai, Secretary, MES  
Dr. Priam Pillai, CEO, MES  
Mr. Franav Pillai, Dy. CEO, MES  
Dr. Lata Menon, Dy. CEO, Rasayani Campus  
Prof. Munawira Pillai, Director, MES  
Dr. J. W. Bakal, Principal, PHCET

**CONVENORS**

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Prof. Rohini Bhosale (M) +91 - 8976658138  
rbhosale@mes.ac.in

**CO-ORDINATORS**

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srshinde@mes.ac.in  
Prof. Kajal Patel (M) +91-8655456085  
kajalpatel@mes.ac.in

---

**REGISTRATION DETAILS**

- Registration will be done on first come first serve basis, 40 seats are available.  
**Registration form link:** <https://forms.gle/iCIH2q5yZyEEt5vC7>
- Last date** of registration is **Thursday, 30th June, 2022.**
- Registration Charges are as follows:  
PHCET members- Rs. 1500/-  
ISTE members- Rs. 1200/-  
Others- Rs. 400/-  
UPI ID: snehalshinde9821@oksbi  
Mobile no. 8087626518
- Mode of participation for PHCET faculty: Offline | Others: Online



UPI ID: snehalshinde9821@oksbi



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**ORGANIZING COMMITTEE**

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Prof. Archana Augustine  
Prof. Poonam Pathak  
Prof. Monisha Mohan  
Prof. Shamna Sadanand  
Prof. Rupali Sathe  
Prof. Siddhesh Khanvilkar  
Prof. Dhanashri Sakhare  
Prof. Shrutika Khobragade  
Prof. Snehal Chitale  
Prof. Nikita Saindane  
Prof. Prajakta Pote  
Prof. Prachi Sorte  
Prof. Poonam Lad  
Prof. Dipti Patil  
Prof. Akanksha Patil

## MAHATMA EDUCATION SOCIETY

Mahatma Education Society was established in the year 1970 by a group of teachers with the aim of spreading education for all. The society today has 48 institutions from pre-primary to post graduation to research with over 35,000 students and over 2,500 teachers. The society manages several schools imparting instruction in S.S.C., C.B.S.E., I.G.C.S.E. and I.B. programs, Junior Colleges, Degree Colleges, Engineering Colleges, Management Institutions, Polytechnics and Teacher education programs at different locations in Mumbai, Navi Mumbai and Rasayani (Raigad District). Most of the colleges are reaccredited 'A' Grade by NAAC and also accredited by NBA and other Government bodies.

## PHCET

Mahatma Education Society's Pillai HOC College of Engineering & Technology, Rasayani was established in 2009 and is affiliated to University of Mumbai and recognized by AICTE & DTE. In less than 9 years of span PHCET is recognized as one of the premier institutions delivering professional courses in Engineering & Technology at Undergraduate as well as at Post Graduate level. Currently PHCET offers following courses-

- Civil Engineering (UG, PG and PhD)
- Computer Engineering (UG, PG and PhD)
- Electronics & Computer Science (UG)
- Electronics and Telecommunication (PG)
- Electrical Engineering (UG)
- Information Technology (UG)
- Mechanical Engineering (UG & PG)

## COURSE OBJECTIVES

The main objective of this STTP is to provide fundamental and practical knowledge on growing fields of Machine Learning and Data Science. This program covers the life cycle of Data Science, Statistics of Data Science by using Python. Various techniques of Machine Learning like linear regression, linear algebra with python. It will be helpful for participants to solve real world problems.

## COURSE OUTCOME

Provide conceptual understanding of Data Science and ML to in real world applications. Provide knowledge and hands-on sessions on Python and R' programming.



## COURSE CONTENTS

1. Lifecycle of Data Science
2. Statistics for Data Science
3. R Programming for Data Science
4. Problem formulation and solving
5. Introduction to ML
6. Linear regression
7. Maths for ML
8. Real World problems in AI/ML

## RESOURCE PERSONS

- Dr. Bernard Menezes, IIT Bombay
- Dr. Yogesh Jadhav, SVKM's NMIMS, Navi Mumbai
- Dr. Darshan Ingle, Thadomal Sahani COE, Mumbai
- Dr. Bhushan Jadhav, Thadomal Sahani COE, Mumbai



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AY 2020-21

Program Name: Fundamental of Accelerated Computing with CUDA  
C/C++



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**Two Days Workshop**  
**on**  
**Fundamentals of Accelerated Computing**  
**with CUDA C/C++**

**Date: 16<sup>th</sup> and 17<sup>th</sup> April 2021**

**Organised by**

***Department of Information Technology***



Mahatma Education Society's

**PILLAI HOC COLLEGE OF ENGINEERING AND TECHNOLOGY**

Pillai HOC Education Campus, HOCL Colony

Rasayani, Tal: Khalapur, Dist: Raigad.

A handwritten signature in blue ink, appearing to read 'S. J. ...'.

**PRINCIPAL**

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Engineering and Technology,  
Pillai's HOC Educational Campus  
Rasayani, Tal: Khalapur  
Dist. Raigad, Pin-410 207



**Theme:**

The NVIDIA Deep Learning Institute (DLI) and Pillai HOC College of Engineering and Technology, Rasayani, has organized Two days Workshop on "Fundamentals of Accelerated Computing with CUDA C/C++ ". Workshop is organized by Department of Information Technology; this is scheduled on 16th and 17th April 2021 exclusively for verifiable academic students, staff, and researchers.

In this Workshop 51 participants registered and actively participated for the course.

14 participants successfully completed and received certificate from NVIDIA as they have cleared final test of Fundamentals of Accelerated Computing with CUDA C/C++ by NVIDIA(DLI). This workshop conducted online with google meet mode.

This Workshop is practical oriented beneficial to UG and PG students. to recognize their subject matter competency and support professional career growth.

The objective of this workshop is to learn fundamental tools and techniques for accelerating C/C++ applications to run on massively parallel GPUs with CUDA®.

The workshop also looks at optimize memory migration between the CPU and GPU accelerator, and implement the workflow.

The course further examines the actions and processes that can be used to Accelerate Applications with CUDA C/C++

NVIDIA DLI offers hands-on training for developers, data scientists, and researchers looking to solve challenging problems with deep learning and accelerated computing.

**About This Workshop:**

This workshop teaches the fundamental tools and techniques for accelerating C/C++ applications to run on massively parallel GPUs with CUDA®. You'll learn how to write code, configure code parallelization with CUDA, optimize memory migration between the CPU and GPU accelerator, and implement the workflow that you've learned on a new task - accelerating a fully functional, but CPU-only, particle simulator for observable massive performance gains. At the end of the workshop, you'll have access to additional resources to create new GPU-accelerated applications on your own.

**Learning Objectives:**

At the conclusion of the workshop, you'll have an understanding of the fundamental tools and techniques for GPU-accelerated C/C++ applications with CUDA and be able to:

- Write code to be executed by a GPU accelerator
- Expose and express data and instruction-level parallelism in C/C++ applications using CUDA



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- Utilize CUDA-managed memory and optimize memory migration using asynchronous prefetching
- Leverage command line and visual profilers to guide your work
- Utilize concurrent streams for instruction-level parallelism
- Write GPU-accelerated CUDA C/C++ applications, or refactor existing CPU-only applications, using a profile-driven approach

#### **Workshop Content:**

- ❖ Accelerating Applications with CUDA C/C++
- ❖ Managing Accelerated Application Memory with CUDA Unified Memory and nsys
- ❖ Asynchronous Streaming, and Visual Profiling for Accelerated Applications with CUDA C/C++

#### **Prerequisites:**

Basic C/C++ competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of CUDA programming is assumed.

#### **Certificate:**

Upon successful completion of the assessment, participants will receive an NVIDIA DLI certificate to recognize their subject matter competency and support professional career growth.

At the end of workshop feedback is collected from the participants.

The program was concluded with Vote of Thanks speech by Dr. J.E. Nalavade Head of the IT Department.

In this Workshop participants actively participated and successfully completed the course.

Workshop conducted through online mode using google meet application.

Group Photograph of two days' Workshop is taken through screenshots of the online meet.

Student's Feedback:

As per discussion with the students, the topic covered was appreciated by most of the students and requested to arrange such workshop in the future also.

#### ***Schedule of Workshop:***



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TOPIC	DESCRIPTION
<b>DAY 1</b>	
<b>Introduction</b>	<ul style="list-style-type: none"> <li>&gt; Meet the instructor.</li> <li>&gt; log in at <a href="https://courses.nvidia.com/">courses.nvidia.com/</a></li> </ul>
<b>Accelerating Applications with CUDA C/C++</b>	<p>Learn the essential syntax and concepts to be able to write GPU-enabled C/C++ applications with CUDA:</p> <ul style="list-style-type: none"> <li>&gt; Write, compile, and run GPU code.</li> <li>&gt; Control parallel thread hierarchy.</li> <li>&gt; Allocate and free memory for the GPU.</li> </ul>
<b>Break</b>	
<b>Managing Accelerated Application Memory with CUDA C/C++</b>	<p>Learn the command line profiler and CUDA managed memory, focusing on observation-driven application improvements and a deep understanding of managed memory behavior:</p> <ul style="list-style-type: none"> <li>&gt; Profile CUDA code with the command line profiler.</li> <li>&gt; Go deep on unified memory.</li> <li>&gt; Optimize unified memory management.</li> </ul>
<b>DAY 2</b>	
<b>Managing Accelerated Application Memory with CUDA C/C++</b>	<p>Learn the command line profiler and CUDA managed memory, focusing on observation-driven application improvements and a deep understanding of managed memory behavior:</p> <ul style="list-style-type: none"> <li>&gt; Profile CUDA code with the command line profiler.</li> <li>&gt; Go deep on unified memory.</li> <li>&gt; Optimize unified memory management.</li> </ul>
<b>Break</b>	
<b>Asynchronous Streaming and Visual Profiling for Accelerated Applications with CUDA C/C++</b>	<p>Identify opportunities for improved memory management and instruction-level parallelism:</p> <ul style="list-style-type: none"> <li>&gt; Profile CUDA code with Nsight Systems.</li> <li>&gt; Use concurrent CUDA streams.</li> </ul>



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<b>Final Review</b>	<ul style="list-style-type: none"> <li>&gt; Review key learnings and wrap up questions.</li> <li>&gt; Complete the assessment to earn a certificate.</li> <li>&gt; Take the workshop survey.</li> </ul>
<b>Duration:</b>	2-3 Days
<b>Assessment type:</b>	Code-based
<b>Certificate:</b>	Upon successful completion of the assessment, participants will receive an NVIDIA DLI certificate to recognize their subject matter competency and support professional career growth.
<b>Prerequisites:</b>	Basic C/C++ competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of CUDA programming is assumed.
<b>Languages:</b>	English, Japanese, Chinese
<b>Tools, libraries, and frameworks:</b>	Nsight Systems

**Speaker Profile:**

Prof. Sandeep Mane Assistant Professor, Department of Computer Science and Engineering  
Rajarambapu Institute of Technology, Rajaramnagar Dist. Sangli. Maharashtra, India – 415414.  
Mobile No: +91-8208298982, WhatsApp No. +91-9403510475 manesandip82@gmail.com ·  
<https://www.linkedin.com/in/prof-sandeep-mane-06578618> ·

Prof. Sandeep Mane is currently working as Assistant Professor in the Department of Computer Engineering, K.E. Society's Rajarambapu Institute of Technology (An Autonomous Institute affiliated to Shivaji University, Kolhapur) Rajaramnagar, Dist. Sangli, Maharashtra, India. He is NVIDIA DLI University Ambassador and DLI Certified Instructor to teach Fundamentals of Accelerated Computing with CUDA C/C++. He is In-charge of GPU Education Center, awarded by NVIDIA Corporations since 2013-14. He has more than 10 years of Teaching and Research experience in the areas of Nature Inspired Optimization Algorithms, Combinatorial Optimization Problem Solving, Parallel Algorithm Design and Programming. He knows and used Multi-core and Many-core Programming languages and packages like OpenMP, MPI, and CUDA C/C++. He has taught courses like Software engineering, Applied Algorithms, Optimization Techniques,

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Department of Information Technology  
 Pillai HOC College of Engineering and Technology, Dist. Raigad  
 (Maharashtra)  
 In Collaboration with NVIDIA Deep Learning Institute

**Organized**

**Two days Workshop on  
 Fundamentals of Accelerated  
 Computing with CUDA C/C++**

**Prof. Sandeep Mane**  
 NVIDIA DLI Certified Instructor  
 Dept. of CSE  
 Rajarambapu Institute of Technology, Rajaramnagar  
 (An Autonomous Institute affiliated to Shivaji University, Kolhapur, Maharashtra)  
[manesandee@rediffmail.com](mailto:manesandee@rediffmail.com)

16-04-2021 10:41 AM

### Schedule

**Day 1**

- Fundamentals of accelerated Computing using CUDA C/C++
- CUDA Programming execution model and thread organization.
- CUDA visual and command line profiling with vector addition

**Day 2**

- CUDA visual and command line profiling with vector addition.
- Case studies vector addition and unified memory.
- CUDA unified memory and CUDA streams.
- Final Project.

16-04-2021 Fundamentals of Accelerated Computing with CUDA C/C++ 2

*Sandeep Mane*

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The screenshot shows a Google Meet interface with a presentation slide. The slide title is "Sequential vs Parallel". Under "Scenario 1", it lists: "Task: Digging a 20 meter big hole", "Resources: 1 Worker, 1 shovel", "Efficiency: 1 meter per hour", and "Time: 20 Hrs.". To the right is an illustration of a 3D white figure digging a hole with a shovel. The bottom of the slide includes the date "16-04-2021", the text "Fundamentals of Accelerated Computing with CUDA C/C++", and the logo for "DEEP LEARNING INSTITUTE".

*T. Anand*

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AY 2019-20

## How to make Your own Operating System

Mahatma Education Society's  
**Pillai HOC College of Engineering & Technology, Rasayani**  
Department of Information Technology

### Report on Two Days Workshop on How to make your own operating System

Pillai HOC College of Engineering and Technology, Rasayani organized Two Days Workshop on "How to make your own operating System" by the Department of Information Technology. This course provides comprehensive Operating Systems training for those who prefer to come up to speed on making a new operating system. The prerequisites are the rapid pace of this class favors those who learn new concepts quickly, or have previous knowledge of Unix system administration in order to resolve problems and correctly execute the commands listed. In particular, as an absolute minimum, participant should already have the ability to use the command line (shell) to copy or move files and directories, list directory and file contents, and change the current directory. It is also expected that participant have a reasonable knowledge of using and installing the Linux operating system and software. If participant have already attended 'Booting' workshop that will be an advantage as trainer will be skipping the Linux bootloader configuration part.

The faculty development program on Data Science started with the lighting of lamp by dignitaries Mr. Yogesh Babar (RedHat Ltd. Pune), Dr. Lata Menon, Dr. Ashok Kanthe, Dr. J. E. Nalavade and HODs of other departments in Conclave. Dr. J. E. Nalavade welcomed all the participants for the FDP and gave the bouquet to the Mr. Yogesh Babar (RedHat Ltd. Pune). Dr. Lata Menon made familiar to the participants the need of Operating Systems workshop as everyone can contribute to the Linux operating system.



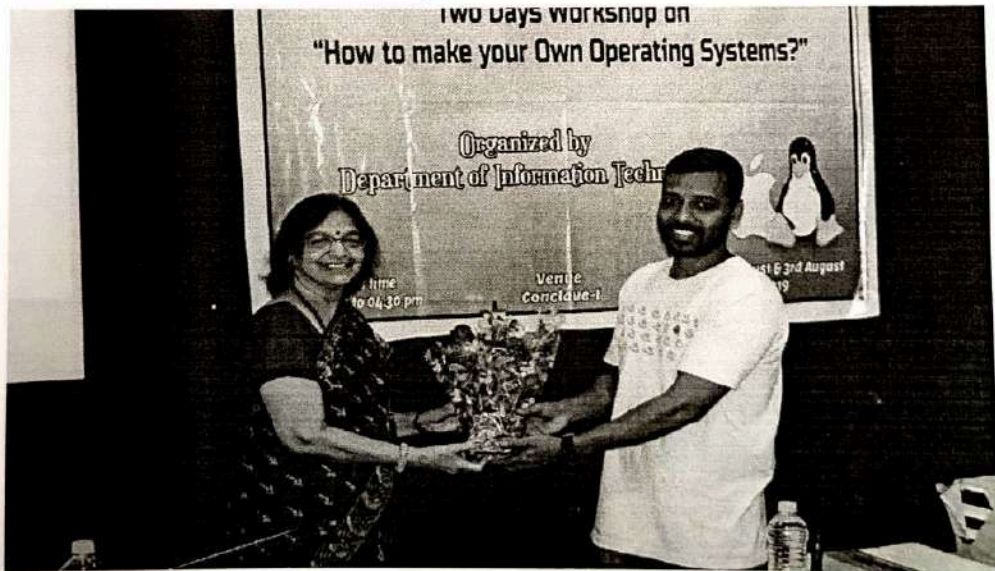
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Workshop on How to make your own OS started with the lighting of lamp by dignitaries



Dr. Lata Menon gave the bouquet to the trainer

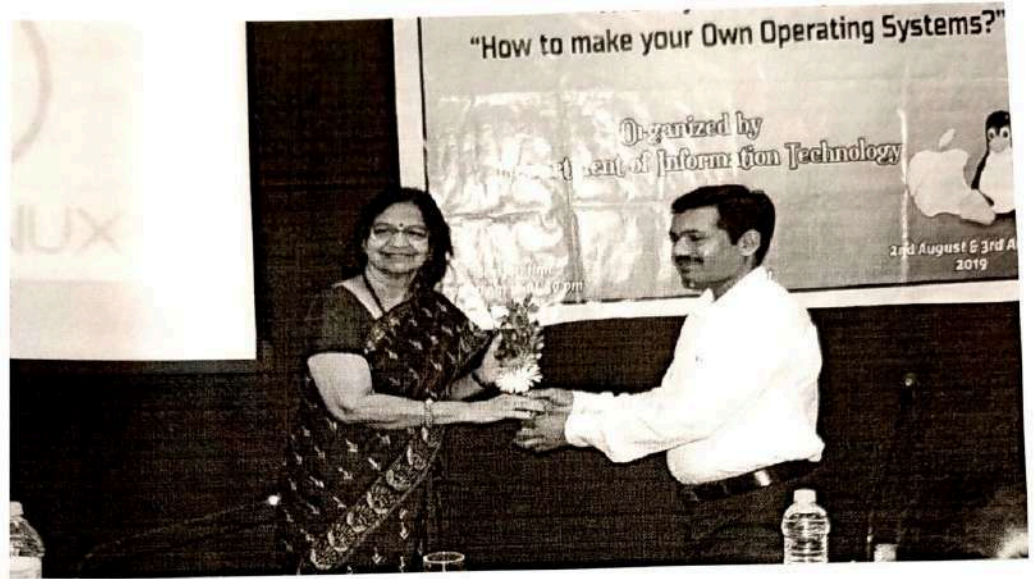
*Lata Menon*

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Dr. J.E.Nalavade gave the bouquet to the Dr. Lata Menon



Workshop Participants along with Dignitaries

*J. Nalavade*

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**Course outcomes of FDP in Data Science are:**

- Participants will study operating system concepts.
- Participants will demonstrate proficiency with Compiler construction and the way they work.
- Participants will study Linker/ Loader.
- Participants will study Linux kernel construction.
- Participants will demonstrate skill in Kernel Debugging.
- Participants will apply Porting Linux on an ARM processor.

The detailed day wise coverage of Workshop contents are as follows:

• **Day 1**

Introduction to How to make your own operating System, Basic Commands, Bash Commands, System Commands, Files, Concepts, Linux redirection operators.

**A. Basic Commands ⇒**

cp,mv,ls,mkdir,cat,less,vi,find,touch,ln,uname,wc,tail,rm,tar,find,file,grep

**B. Bash Commands ⇒**

echo,path,export,sed,env,exec,sed,gawk

**C. System Commands ⇒**

Useradd,groupadd,chown,mount,su,du,df,passwd,chgrp,chmod,mkfs,fdisk,  
umask,uname,chroot,mknod

**D. Files ⇒**

/etc/passwd,/etc/shadow,bash\_profile,bashrc

**E. Concepts ⇒**

rx permissions,  
Linux Filesystem



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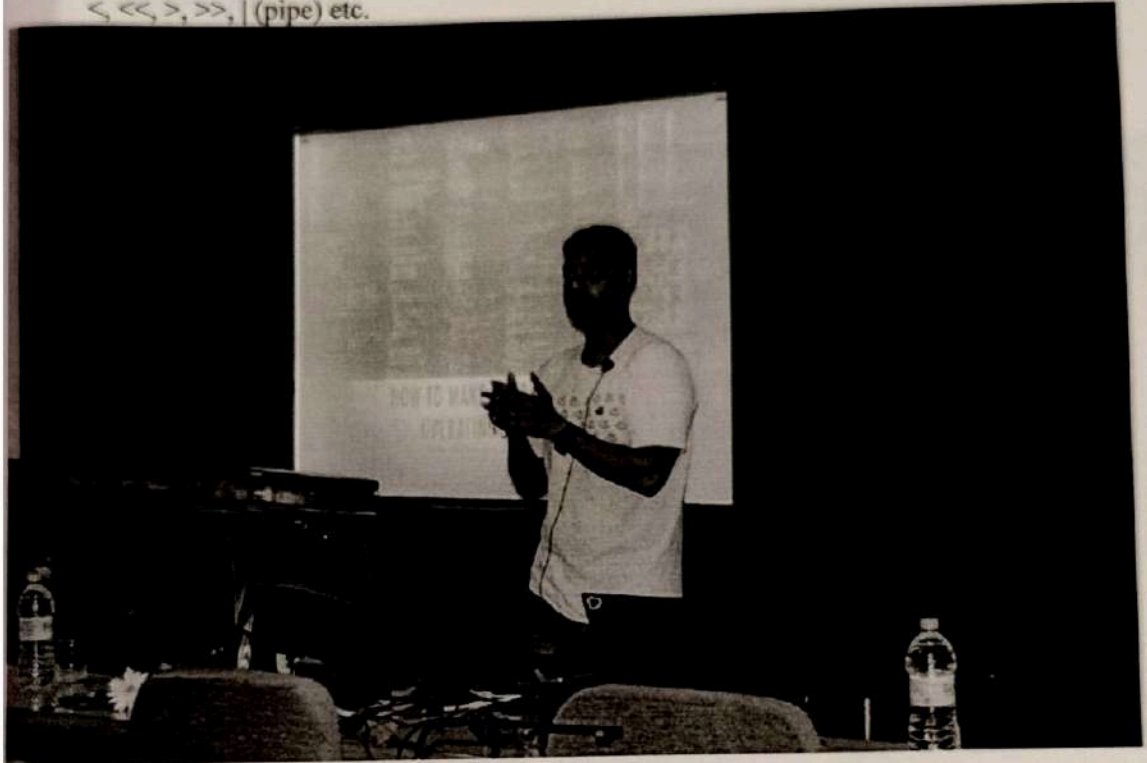
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Environment variables (like HOME, TERM, PS1),  
the 'configure/make/make install' way of installing packages in Linux.  
somewhat Bash shell scripting knowledge will be advantage.

**F. Linux redirection operators =>**

<, <<, >, >>, | (pipe) etc.



**Mr. Yogesh Babr introduction the participants about workshop**

**Following contents are covered on First day:**

- 1) Compiler construction and the way they work.
- 2) Linker/ Loader.
- 3) Tools chain.
- 4) Linux kernel construction.
- 5) Kernel Build system.
- 6) Device Drivers

*J. J. J.*

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- **Day 2**

Workshop started with kernel debugging. **Following contents are covered on Second day:**

- 7) Kernel Debugging.
- 8) Embedded systems.
- 9) ARM processors.
- 10) Porting Linux on an ARM processor.
- 11) Bootloaders.



The certificate distribution ceremony was the last phase of the workshop. The certificates for participants and organizing committee were distributed by Dr.J.E.Nalavade and Mr. Yogesh Babar. Dr.J.E.Nalavade gave vote of thanks to all the dignitaries, HODs, participants, organizing committee members, teaching and non-teaching staff for their continuous support.

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Certification distribution to the Participants



Certification distribution to the Participants

*Signature*

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## Electrical Department

### Value Added Course: PCB Design AY 2022-23

Pillai HOC College of Engineering and Technology, RASAYANI.  
DEPARTMENT OF ELECTRICAL ENGINEERING  
OSAY 2022-23  
Ms. Supriya and Ronita (March-4,11,18)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
10:15 11:15 2						PCB Designing Lab C 001
11:15 12:15 3						PCB Designing Lab C 001
12:15 13:15 4						PCB Designing Lab C 001
13:15 13:45						
13:45 14:45 6						PCB Designing Lab C 001
14:45 15:45 7						PCB Designing Lab C 001
15:45 16:45 8						

*Supriya* *Ronita* *Wahid*

Time table of Value added course:Electrical Department :PCB Design AY  
2022-23

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**Pillai HOC College of Engineering & Technology, Rasayani**

**Course Title: Introduction to PSpice and LTspice and Its Application**

Sr. No	Topic	Contents
1.	Introduction to PSpice and LTspice	An outline of Pspice, Types of Analysis in Pspice
2.	Getting statring with PSpice and LTspice	DC simulation, PSpice Component Layout, DC Bias Simulation ,Linear Resistance ,Non-Linear Resistance Operating Point, Markers, Parametric DC Sweep Thévenin and Norton Equivalentns
3.	AC Simulations	AC Inputs, Time Domain (transient analysis), AC Sweep Analysis
4.	Solar cell and Module simulation for STC	Solar cell modelling and simulation analysis



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Value Added Course

- **Course Title: Introduction to PSpice and LTSpice and Its Application**
- **Course Outcome:**
  - a) Student can acquire experience in designing electronic circuits to perform real task
  - b) Student can understand what is PSpice or LTSpice and its use in industrial application
  - c) Student knows how to simulate a circuit using a PSpice or LTSpice simulator.
  - d) Student can demonstrate how to simulate an actual circuit using a PSpice or LTSpice in laboratory setting
  - e) Students can able to conduct circuit analysis using a PSpice or LTSpice circuit simulator
  - f) Student can able to apply acquire for various application
  
- **Class: BE/TE - Electrical Engineering**
- **Duration: 15 hrs**
- **Course Fees: Free**

**Course Instructor:** 1. Ms. Asokan Selvaraj- aselvaraj@mes.ac.in

Value Added Course: PCB Design AY 2022-23 Syllabus



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**Course Title: PCB Designing**

Sr. No	Topic	Contents
1.	Overview of PCB Designing	Definition and Need/Relevance of PCB, Background and History of PCB
2.	Basics of PCB Designing: Types of PCB, Layering of PCB	Types of PCB, Classes of PCB Design, Terminology in PCB Design
3.	PCB-CAD tools: DipTrace, Eagle, Altium	Different Electronic design automation (EDA) tools , Introduction to DipTrace, Eagle and Altium Environment, Latest Trends in Market
4.	Electronic and Semiconductor Component package types	Different types of electronic components, Electronic components according to their size, power-ratings, package style and placements
5.	Practical Implementation	Steps involved in fabrication of PCB. PCB Fabrication techniques-single, double sided and multilayer, Auto routing, Drilling, Etching: chemical principles and mechanisms, Post operations- stripping, black oxide coating and solder masking, PCB component assembly processes
6.	Fundamental and real world project	Design and fabricate PCB for any one project, mount the components, testing and troubleshooting methods



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Value Added Course: Workshop on Electrical wiring and PCB design AY  
2021-22

A Workshop on "Electrical Wiring and PCB Designing" was conducted by Prof. Asokan S., Assistant Professor, Prof. R. D. More, Assistant Professor and Prof. Aamir Shaikh, Assistant Professor (Department of Electrical Engineering) for all First year students on 9th June, 2022.



In this session professors discussed about the basics of Electrical Wiring and about different types of switches like, SPST, SPDT, DPST, DPST and their operation. Along with it, Different types of wiring schemes which are used like cleat wiring, Batten wiring, Lead sheath wiring, casing and capping



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wiring schemes was discussed. Also, they have explained the different types of cables and maximum voltage level for the same. Two types of wiring schemes i.e., Go-down wiring and staircase wiring and the rules to be considered for the installation in residential wiring schemes was discussed.

In this session Prof. Asokan S. and Prof. Aamir Shaikh explained the basic wiring schemes that are implemented in the protection laboratory and the contactors connections. Also they have demonstrated the different wiring schemes. Thus students were made aware of how to implement different hardware circuits that can be useful to them in project and further semester subjects. "Industrial Wiring" In this session, Prof. R. D. More was explained the students different industrial wiring schemes and gave introduction regarding the different panels that are used in Industries. He also explained the different fuses and switches that are used in the industrial panel. He explained the operation of different types of starters like DOL and star-delta starter, its implementation with the 3-phase Induction motor. He explained the students the wiring of starters and contactors on the panel.

PCB Designing is one of the most emerging fields in Electronics in today's era. For the students of Electrical this is a good field to start their career. PCB designers are key persons in research and development (R&D), electronics production units as well as in the PCB industry. The workshop



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was aimed to provide knowledge about simulation tools to test electronics & electrical circuits in software environments, PCB design software named DIPTRACE & to make physical PCB at home so that any student can make a project on his own.

**Following content are covered in workshop:**

Speaker: Ms. Snehal Jadhav (PHCET, PCB Industry)

- > Schematic Design
- > Component Footprint Design
- > Integrated Library Design
- > PCB Design & Routing
- > Etching of PCB
- > Soldering of Components on PCB

**Value Added Course: The Enterprise AY 2020-21**

**Syllabus**

Understanding the Enterprise Systems Environment is the second course in the SAP Technology Consultant Professional Certificate program. The course builds your understanding of the digital landscape.

You'll explore business processes and organizational alignment. You'll get an overview of how systems are designed and developed, and consider architecture, infrastructure, application development, data science, cloud, privacy, and security. You'll build your understanding of the SAP platform and consider key development and deployment models covering Advanced Business Application Programming (ABAP), Java, SAP API, and SAP Fiori. Plus, you'll explore gap analysis using SAP RISE and Activate and become familiar with SAP cloud strategy, architecture, and tools.

By the end of this course, you will be able to:

Describe how digital transformation can impact a customer's organization, business processes and tools (people/process/tools).

Identify the key elements of system design and development and how they relate to specific IT requirements.

Identify different computing models (e.g. Compute Network Storage, OnPrem, Cloud etc) and architectures (e.g. Native, Hybrid, Multi-Cloud).

Explain the key elements of the SAP platform and environment.

Describe key Application, Development and Programming models.

Explain the key elements of the SAP Cloud Strategy.

Understand the key questions to keep in mind when faced with a specific request from a prospective client.



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**Value Added Course: Electrical Utilities AY 2019-20**

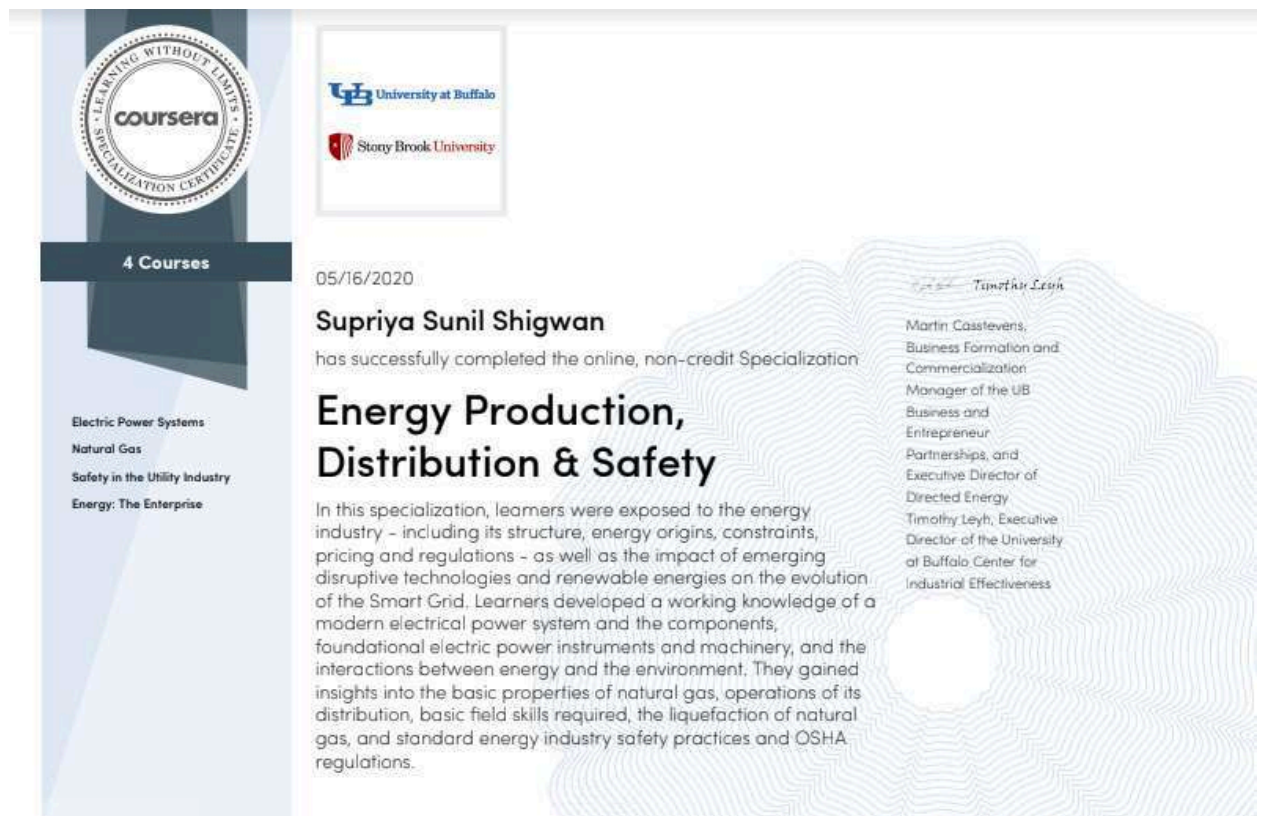
**syllabus**

THIS COURSE GIVES YOU THE INSIDE TRACK TO A COMPLICATED INDUSTRY. The approach of this course is truly unique in how it approaches and engages learners. It looks at the electric utility industry, which has remained critical to our quality of life, health and comfort from the eyes of numerous industry experts through on-location interviews, compelling visuals, and animation. You will benefit from having the inside track because you see some behind-the-scenes information not covered in news stories, social media or even if we are in the business ourselves.

EACH WEEK YOU NOT ONLY LEARN WHAT IS CHANGING, BUT WHY. As this industry continues to unfold at an unprecedented pace, you will be armed with knowledge and insights to form informed opinions supporting decisions you will increasingly make for your energy-dependent homes and businesses.

This course kicks off with animated crash course on industry history, highlighting aspects of the structure, governance, and technology that remain today, despite the passage of time. Then, throughout the modules, you will build some basics about how electricity gets to you, who watches over decisions, including setting rates. This information establishes a knowledge foundation so that when we explore some of the most critical topics, like renewable energy, smart grid, battery storage, and you can think about it from a much more analytical and critical viewpoint.

YOU WILL DEVELOP A FRAMEWORK FOR MAKING SENSE OF THIS INDUSTRY THAT WILL BENEFIT YOU BEYOND THIS COURSE. This industry can get pretty complicated, and this course will help you make more sense of it. Electric Utilities Fundamentals and Future is the course for you whether you're just curious about the industry or an industry veteran looking to grow – or, thinking about joining the industry. (Hint: now is a good time. You'll learn why in this course.) No prior education or experience required. You just need a healthy curiosity and an open mind to learn about an industry that I think a lot of us, including myself sometimes, take for granted.



**LEARNING WITHOUT LIMITS**  
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4 Courses

Electric Power Systems  
Natural Gas  
Safety in the Utility Industry  
Energy: The Enterprise

University at Buffalo  
Stony Brook University

05/16/2020

**Supriya Sunil Shigwan**  
has successfully completed the online, non-credit Specialization

## Energy Production, Distribution & Safety

In this specialization, learners were exposed to the energy industry - including its structure, energy origins, constraints, pricing and regulations - as well as the impact of emerging disruptive technologies and renewable energies on the evolution of the Smart Grid. Learners developed a working knowledge of a modern electrical power system and the components, foundational electric power instruments and machinery, and the interactions between energy and the environment. They gained insights into the basic properties of natural gas, operations of its distribution, basic field skills required, the liquefaction of natural gas, and standard energy industry safety practices and OSHA regulations.

*Timothy Leish*  
Martin Casstevens,  
Business Formation and  
Commercialization  
Manager of the UB  
Business and  
Entrepreneur  
Partnerships, and  
Executive Director of  
Directed Energy  
Timothy Leyh, Executive  
Director of the University  
of Buffalo, Center for  
Industrial Effectiveness



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Value Added Course: Introduction to MATLAB and its Application A.Y  
2018-19

Syllabus

Mahatma Education Society's

**Pillai HOC College of Engineering & Technology, Rasayani**

**Course Title: Introduction to MATLAB and Its Application**

Sr. No	Topic	Contents
1.	Starting with MATLAB	Starting MATLAB, MATLAB windows Working in the command window Arithmetic operations with Scalars Using MATLAB as a calculator
2.	Creating Arrays	Creating a one-dimensional array (vector), Creating a two-dimensional array (matrix) Addition and subtraction with arrays Array multiplication and array division
3.	Applications in Numerical Analysis	Numerical analysis Solving an equation with one variable finding a minimum or a maximum of a function examples of MATLAB applications
4.	Applications in Control System	Plotting bode plots using MATLAB plotting root locus using MATLAB
5.	Applications in Power System and power Electronics	Introduction to SIMULINK toolbox Simpower system Developing Simulation models of power system and Power electronics examples

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I  
Value Added Course

- **Course Title : Introduction to MATLAB and Its Application**
- **Course Outcome:**
  - a. To improve employability skills of engineering students
  - b. To bridge the skill gaps and make students industry ready.
  - c. Student can able to generate plots and export this for use in reports and presentations.
  - d. Student can able to program scripts and functions using the Matlab development environment.
  - e. Student can able to understand various toolboxes and their application in various domains
  - f. Student can able to model and simulate system to analysis its performance.
- **Class:** BE/TE - Electrical Engineering
- **Duration:** 15 hrs
- **Course Fees:** Free

Course Instructor: 1. Ms. Lakshmi C R - [crlakshmi@mes.ac.in](mailto:crlakshmi@mes.ac.in)

2. Ms. Pranita Chavan- [pranitachavan@mes.ac.in](mailto:pranitachavan@mes.ac.in)



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## Programme Name: Electronics and Telecommunication

**Academic Year: 2018-19**

### **Training Program on "CCNA"**

Date: 13th, 14th, 15th and 16th February, 2019

Pillai HOC College of Engineering and Technology, Rasayani organized a Four Days Training Program on Cisco Certified Network Associate under MOU between Telenetworks Pvt. Ltd. and PHCET Ms. Mansi Subhedar is convener for this event every year. Mr. Abhijeet More, Ms. RupaliSathe, Ms. Supriya S. Shigwan coordinated this event successfully. 80 students altogether from Computer, EXTC, IT and Electrical Engineering departments participated in this workshop. YogeshHudale - Founder and Chief Mentor at TeleNetworks Technologies, trained students for four days.

CCNA is an internationally recognized qualification that provides the students with the opportunity to enter employment in the computer networking field. The syllabus of this workshop covers blueprint of CISCO.

The guest speaker took over the session with an introductory focus on basics of CCNA. The trainer then started the practical sessions and taught students how to design their own networks, how to connect various devices and showed the demonstrations of real time routers and switches. With the help of videos and visuals, the students learned the basics of routing.

The students were then taught about the area networks and their network fundamentals, how networking works in Industries, how to configure Real-time Routers, Switches and other Networking equipment etc. Information about Cisco Certifications and their importance, Roles and Responsibilities of Network engineers in Companies, Types of Routers, Switches, Firewalls and their usage in the industries etc. was also discussed



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**Academic Year: 2022-23**

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Rasayani, Raigad – 410222  
Department of Electronics and Computer Science

*A Report on Workshop on*

## **“Arduino Programming”**

*Conducted under IETE Student Forum*

A Workshop on “Arduino Programming” was conducted by Prof. Upendra D Patil, Assistant Professor of Department of Electronics and Computer Science, PHCET under IETE Students forum, one of the leading Professional Society in India, on 6<sup>th</sup> March, 2023 for second year engineering students of Electronics and Computer Science department.

Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED, publishing something online. Programmer can tell board what to do by sending a set of instructions to the microcontroller on the board. To do so Arduino programming language and Arduino Software (IDE) is used. Over the years Arduino has been the brain of thousands of projects, from everyday objects to complex scientific instruments. A worldwide community of makers - students, hobbyists, artists, programmers, and professionals - has gathered around this open-source platform, their contributions have added up to an incredible amount of accessible knowledge that can be of great help to novices and experts alike. Arduino has been used in thousands of different projects and applications. The Arduino software is easy-to-use for beginners, yet flexible enough for advanced users. It runs on Mac, Windows, and Linux. Teachers and students use it to build low cost scientific instruments, to prove chemistry and physics principles, or to get started with programming and robotics. Arduino boards are relatively inexpensive compared to other microcontroller platforms. Hence Arduino board can be used in embedded systems design for prototyping microcontroller based systems to save time and money.

Event was started with “National Anthem” at 10:30am followed by the informative and motivational talk to have a healthy “Arduino Programming” workshop by Prof. Upendra Patil. Prof. Mithun Nair and Prof. Shashikant Renushe had coordinated further appreciably to make it a successful workshop to enhance student’s skill level. 46 students had participated in this event.

Following points have been covered during the workshop:

- Introduction to Embedded System Design



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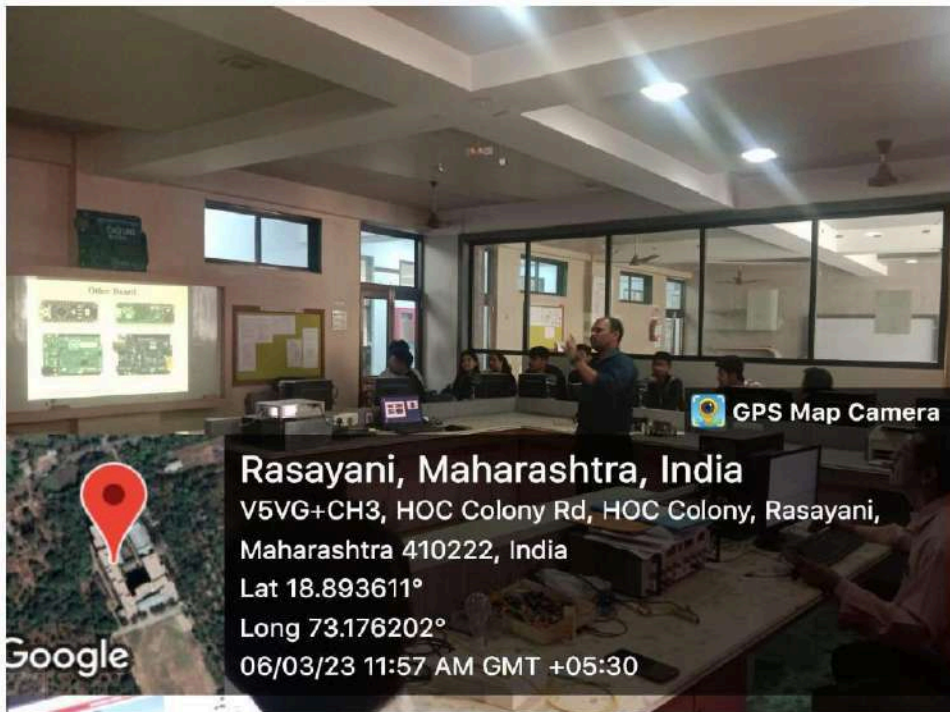
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*Prasad*

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## Academic Year: 2021-22

### Value add Course:

**Course Title: Python for Data Science and Machine Learning**

### Course Outcome

After the successful completion of the course, students must be able to:

- Learn about Python fundamentals, Python data structures, and working with data in Python
- Become familiar with key Python functions, objects, and classes
- Develop data science and ML applications using Python
- Gain career skills in one of the world's most popular programming languages

**Eligibility:** Any students with basic understanding of programming

**Duration:** Min 35 hours

**Course Fees:** Nil

### Course Instructor

1. Dr. Mansi Subhedar  
[msubhedar@mes.ac.in](mailto:msubhedar@mes.ac.in)
2. Ms. Pooja Shukre  
[pshukre@mes.ac.in](mailto:pshukre@mes.ac.in)

### Course Content

Introduction to AI, ML and Data Science, Python	Introduction to Data Science, AI and Machine learning and its applications, Examples of AI, Data Science applications in various engineering disciplines Introduction to Python, features of Python, Installation, Installing python Packages
Data Types	Integer, Float and Complex- Number Functions (Number Type Functions, Maths Functions, Random Number functions, Trigonometric Functions)
Operators in Python	Arithmetic, Assignment, Comparison, Boolean values, Logical, identity, bitwise and membership operators, Shift operators
Data Structures: Lists, Tuples, Dictionary	Operations on lists- Append, remove, slicing, insert, pop, reverse, len, count etc, Operations on Tuples and Dictionary
Decision Flow Control Statements	if, if and else statement, Nested If, While, do and while, for, Continue, Break and pass etc
Functions and File Handling	Defining and calling the functions, return statements, Passing the arguments, Lambda Functions



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	Recursive functions, Modules and importing packages in python code File Input/Output: Files I/O operations, Read/Write Operations, File Opening Modes, with keywords, moving within a file, Manipulating files
Numpy, Pandas, Matplotlib, Seaborn, Scipy Libraries:	Introduction to Numpy, Creating and Printing Ndaray, Class and Attributes of Ndaray, Basic operation, Copy and view, Mathematical Functions of Numpy. Introduction to Pandas, Understanding Dataframe, View and Select Data, Missing Values, Data Operations, File read and write operation. Introduction to Matplotlib library, Line properties, Plots and subplots, Types of Plots, Introduction to Seaborn. Introduction to Scipy, Scipy Sub packages Integration and Optimization, Eigen values and Eigen Vectors, Statistic, Weave and IO.
Graphical User Interface and Image processing	Graphical User Interface using Tkinter Library module, creating simple GUI; Buttons, Labels, entry fields, widget attributes
Databases	Sqlite database connection, Create, Append, update, delete records from database using GUI. Basic Image Processing using OpenCV library, simple image manipulation using the image module
Machine Learning Algorithms:	Supervised, Unsupervised, Reinforcement Learning, Case Studies, Deep Learning examples, Case Studies
Regression, Classification, Types of classifiers	KNN, SVM, Decision Tree, Bayes etc, Case Studies

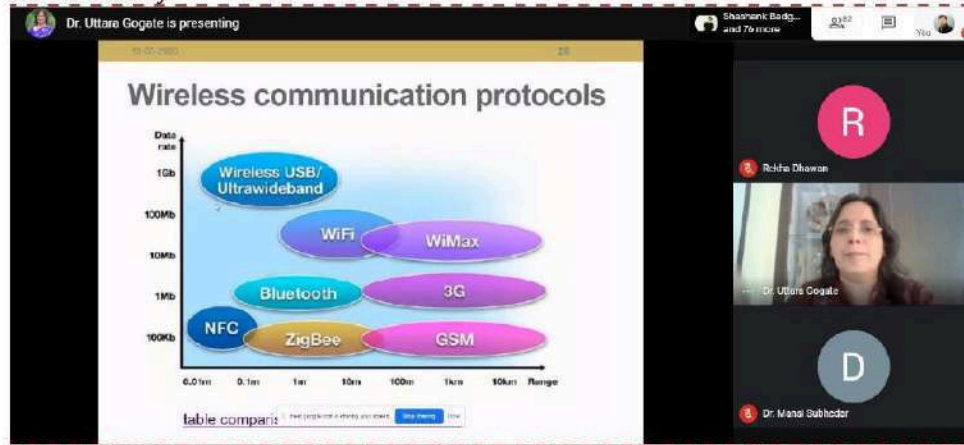
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**Photo Gallery:**



Webinar on Overview and applications of WSN by Dr. Uttara Gogate on 12<sup>th</sup> May 2020

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**Academic Year: 2020-21**

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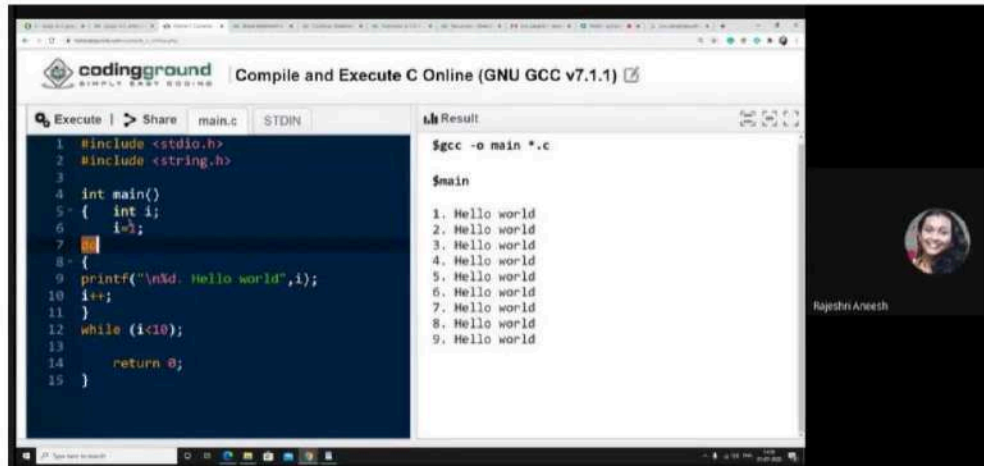
Report of Webinar on  
**C for Everyone: Programming Fundamentals PART: I**

Department of Electronics and Telecommunication Engineering under had successfully conducted an online webinar on **C for Everyone: Programming Fundamentals PART: I on 1<sup>st</sup> July 2020.**

The speaker for webinar was Ms. Rajshree Aneesh from department of computer engineering. Total 30 students from EXTC department attended this webinar. This was an introductory session to the basic course on C Programming. This session was an eye-opener for those who have an aversion towards the courses containing a programming component. The session motivated the participants to inculcate the Programming skills and also to master the art of Programming over the period of time

Key Insights for Students :

1. The need to learn a Computer Programming Language.
2. Introduction to C Programming Language.
3. How to inculcate/develop logical thinking skills required for programming.
4. C Character Set and Tokens.
5. Writing a Simple Program in C.



```
codingground  
SIMPLY EASY CODING  
Compile and Execute C Online (GNU GCC v7.1.1)  
Execute | Share | main.c | STDIN | Result  
1 #include <stdio.h>  
2 #include <string.h>  
3  
4 int main()  
5 { int i;  
6 i=1;  
7  
8 {  
9 printf("\n%d. Hello world",i);  
10 i++;  
11 }  
12 while (i<10);  
13  
14 return 0;  
15 }  
$gcc -o main *.c  
$main  
1. Hello world  
2. Hello world  
3. Hello world  
4. Hello world  
5. Hello world  
6. Hello world  
7. Hello world  
8. Hello world  
9. Hello world  
Rajshree Aneesh
```



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**Department of Electronics and Telecommunication Engineering**

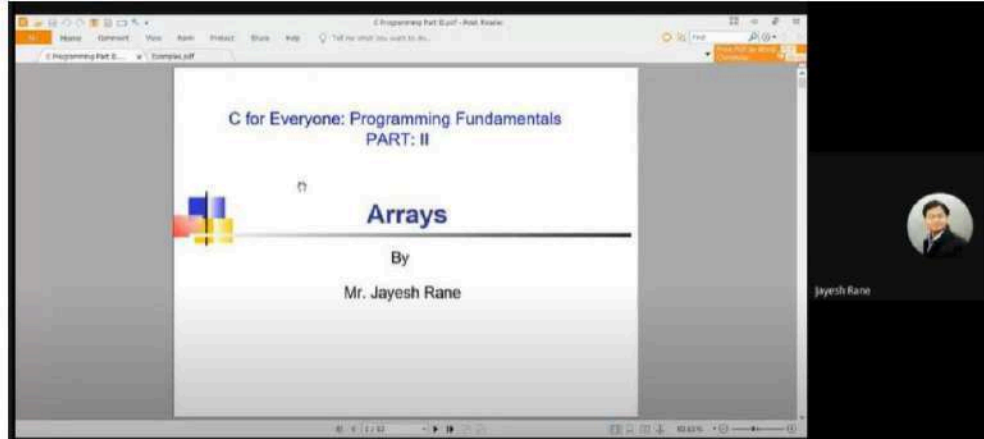
Report of Webinar on  
**C for Everyone: Programming Fundamentals PART: II**

Department of Electronics and Telecommunication Engineering under had successfully conducted an online webinar on **C for Everyone: Programming Fundamentals PART: II on 2<sup>nd</sup> July 2020.**

The speaker for webinar was Mr. Jayesh Rane. Total 30 students from EXTC department attended this webinar. Understanding how pointers work is fundamental to understanding how computers work. Pointers are also much more flexible and powerful than references. The study of pointers in C was main aim of webinar.

Key Insights for Students:

1. Arrays in C
2. Strings in C
3. Structures in C
4. Pointers
5. Files in C



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- Requirement of prototyping in Embedded System Design
- Arduino as prototyping hardware and software
- Arduino IDE
- Arduino programming language
- Digital and Analog Interface



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Pillai HOC College of Engineering and Technology  
Department of Mechanical Engineering

Seminar on "Current Trends and Opportunities in Piping Engineering"

<b>Date and Time</b>	19-04-2023, 10:30 am to 1:30 pm
<b>Venue</b>	Conclave-I
<b>Resource Person</b>	Mr. Rahul E. Eukey (Director, REU Engineering and Consulting LLP.)
<b>Coordinator</b>	Mr. Sunil Singh Rajput
<b>Department</b>	Mechanical Engineering

Mr. Rahul Eukey is founder and Director of REU Engineering and Consulting LLP. REU Engineering and Consulting LLP is manufacturer of Pressure regulating Valves , Safety Valves, Blanketing valves , Gas Manifold & Gas Bank Cascade . REU is supply and service Provider for Gas Detection and calibration system, Gas purification system, Temperature control system. REU is service provider of all type of compressors. Mr. Rahul Eukey has total 20 years of experience Industrial Projects like Gas handling system, compressed air system, and waste heat recovery system for cement industry. REU Engineering and Consulting LLP also provide consulting services for gas distribution system specifically for hydrogen & compressed natural gas.

Total 70 students and faculty have participated the session. Expert started the session by briefing and giving introduction of the field to which he belongs and operations involved in piping industry. Following to that Mr. Rahul Eukey explained spread of 'Piping Engineering' across various industries. Expert also explained our students' insights about how piping engineering can be a great career options, explaining about multiple job profiles mechanical engineer can explore in this field. The expert explained to students about emerging opportunities one can have in piping engineering along with roles and responsibilities associated with different job profiles and growth opportunities to have successful career in Piping Industry.

Mr. Rahul Eukey explained about what all demands of industries and what qualities industries are looking for are. He also explained about specific and generalized skill sets students should pursue to



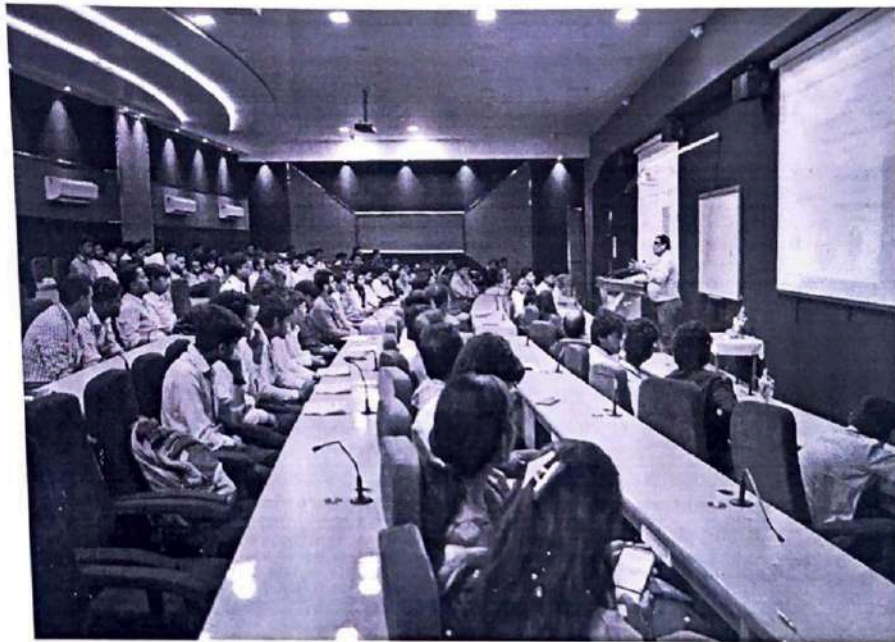
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get specific jobs in piping industry in a minimum possible time. Expert also guided students about how to appear for interviews for piping industry jobs.

The main objective of the seminar was to make students aware about different career opportunities available, skills needed to work in the Piping Engineering Sector, which participants understood by end of the session.

The session ended with Question Answer session and finally concluded by vote of thanks by Dr. G. V. Patil, Head of Mechanical Engineering Department.

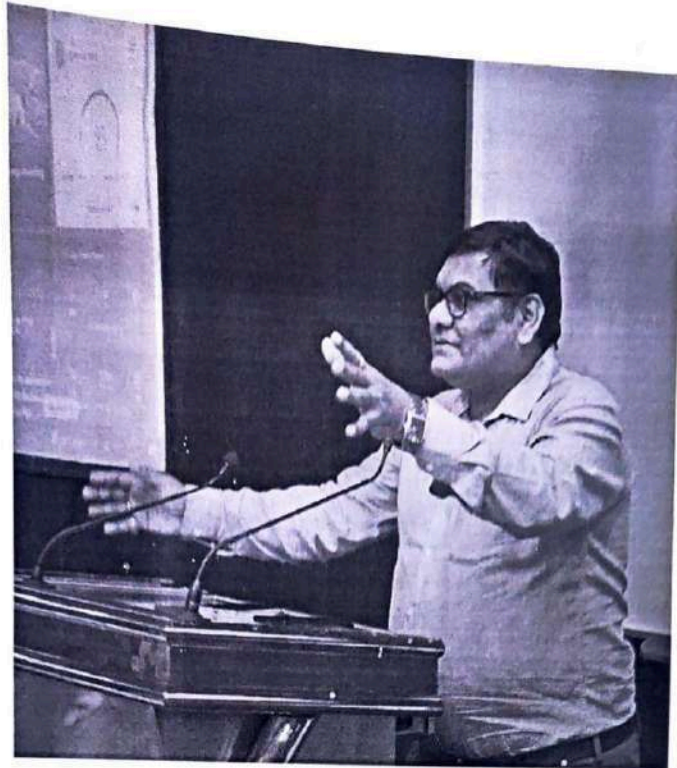


*G. V. Patil*

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*Kulkarni*  
Mr. Sayali Kulkarni  
(Coordinator)

Dr. G. V. Patil  
(HOD Mech)

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Mechanical Engineering




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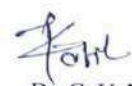
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2021-22

Mahatma Educational Society's  
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Department of Mechanical Engineering  
Department Level BE Project Competition  
**Mech-tEk 2022**  
Summary of Event

<b>Total Number of Students and Groups Participated</b>	43 Students in 11 Groups from Regular Shift
<b>Date of Event</b>	23/04/2022
<b>Judges for the Competition</b>	Mr. Rahul E. Eukey (Director, REU Engineering and Consulting LLP.) Mr. Dhairyashil Patil (Atlas Copco, Pune.) Dr. Sachin Kulkarni (Associate Professor, Sinhgad Institute of Technology, Pune.)
<b>Winners- M 06</b> Guide- Mr. M. K. Jadhav	<b>Tile- Portable Mechanical Hand Pump</b> Mhatre Purva Pradeep Ghag Neeraj Ratnakar Vichare Gaurav Surendra Pawar Yash Harishchandra
<b>Runner Up- MS 01</b> Guide- Mr. S. N. Kadam	<b>Tile- Wall Art Drawing Machine using two axis Robot</b> Pawar Swaraj Santosh Daphale Vipul Vishwas Mahamunkar Yash Sunil Gautam Ujjwalsingh Rajeshsingh
<b>Second Runner Up- M03</b> Guide- Mr. S. N. Kadam	<b>Tile- Making of the automatic liquid soap dispenser integrated with automatic tap water and hand dryer.</b> Shinde Prachiti Prashant Gharat Aniket Harishchandra Ghase Dipendra Prakash Patil Pratik Pandurang

  
Mr. Hemant M. Patil  
(Project Coordinator)

  
Dr. G. V. Patil  
(HOD, Mechanical, PHCET)

  
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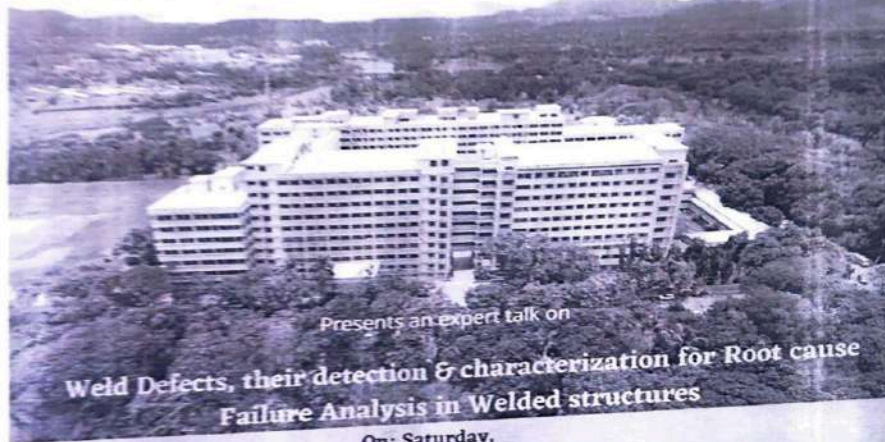
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ACCREDITED WITH 'A' GRADE BY NAAC IN FIRST CYCLE 2019  
AND RE-ACCREDITED BY NBA FOR MECHANICAL AND COMPUTER ENGINEERING 2020

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IIC in association with IQAC, PHCET



Presents an expert talk on

**Weld Defects, their detection & characterization for Root cause  
Failure Analysis in Welded structures**

On: Saturday,  
29th APRIL, 2022  
02:00 PM to 03:00 NOON  
Venue- Conclave I



**Mr. Paresh Haribhakti,**  
Managing Director, TCR Advanced Engineering Pvt. Ltd. Vadodara

**Dr. Gajendra V Patil**  
Convener, IIC &  
Mechanical Engineering,  
PHCET, Rasayani

**Dr. R.C. Prasad**  
President, IIC & Professor,  
Mechanical Engineering,  
PHCET, Rasayani

**Dr. J.W. Bakal**  
Principal  
PHCET, Rasayani

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