Children's Education Society's
THE OXFORD COLLEGE OF ENGINEERING
Hosur Road, Bommanahalli, Bengaluru-560 068

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(Approved by AICTE, New Delhi, Accredited by NBA, New Delhi & Affiliated to VTU, Belgaum)

Department of CSE,ISE &MCA

Report

Two Weeks Faculty Development Program (FDP)

On

"Advancements in Artificial Intelligence (AI) and Machine Learning (ML)"

(14-November-22 to 26-November-22)

Convener/Program Coordinator

Dr.R.Kanagavali

Professor and Head, Information Science and Engineering Department

About Program

The objective of the two Weeks Faculty development program on Advancements in Artificial Intelligence (AI) and Machine Learning (ML) was to enrich the knowledge of faculty, research scholars of all the discipline. The focus of the FDP was on Artificial Intelligence and its trending applications with machine learning and deep learning. The FDP sessions divide into several modules falling under the umbrella of Artificial Intelligence including Machine Learning, Deep Learning, Computer Vision, Data science, Learning Analytics and Natural Language Processing (NLP). The objective was to address modern trends in the field of Artificial Intelligence with real time problem solving. The FDP enriched with speakers hands-on sessions. The speakers of the sessions were from IITs, NITs, Central University of Karnataka (CUK), Industry and reputed Institutes.

Date: 14th to 26th November 2022

Time: Morning Session (FN):9.30 to 11:30 AM; Afternoon (AN) session: 2:00 to 3:30PM

Faculty Coordinators: Prof. Vidhya Venkatesh and Prof. Sandhya Rani

Program Coordinator/Convener: Dr.Vanajaroselin E.Chirchi

Organizing Committee:

1. Dr.R.Kanagavalli, (Professor & HOD, Dept of ISE)
2. Dr.R.Ch.Naidu ,(Professor & HOD, Dept of CSE)
3. Dr.Puja Shashi, (Professor & HOD, Dept. of MCA)
4. Dr.Vanajaroselin E.Chirchi, (Professor)
5. Dr.Saravanakumar, (Professor)
6. Prof.Vidhya Venkatesh, (Assistant Professor)
7. Prof.Sandhya Rani, (Assistant Professor)
8. Prof.JC Achutha, (Assistant Professor)

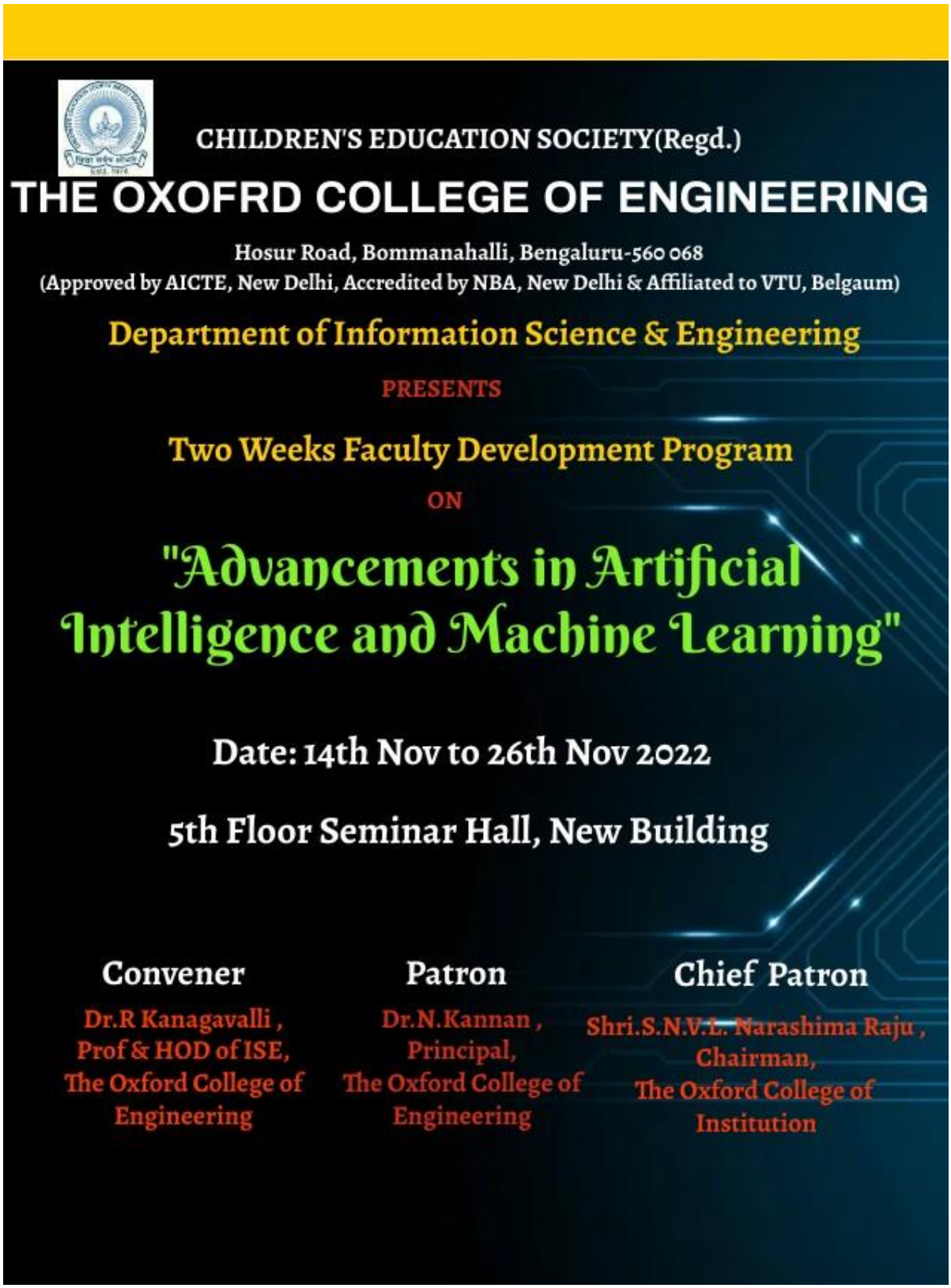
Target Audience:

1. Faculty members from various academic institutes/universities from all over India
2. Research Scholars
3. Industry Personnel

No. of Participants:

1. Academician-15
2. Industry Person-02

FDP Poster: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Department of Information Science & Engineering
PRESENTS
Two Weeks Faculty Development Program
ON
"Advancements in Artificial Intelligence and Machine Learning"
Date: 14th Nov to 26th Nov 2022
5th Floor Seminar Hall, New Building
Convener
Dr.R Kanagavalli , Prof & HOD of ISE, The Oxford College of Engineering
Patron
Dr.N.Kannan , Principal, The Oxford College of Engineering
Chief Patron
Shri.S.N.V.L. Narashima Raju , Chairman, The Oxford College of Institution

List of Faculties registered for 2 week FDP

SL NO	Name of Faculty	Department	Designation
1.	Ms.Jesy Janet Kumari	CSE	Professor
2.	Ms.Visalini	ISE	Asst. Prof.
3.	Mr.J.C.Achutha	MCA	Asst. Prof.
4.	Ms.Manasa	CSE	Asst. Prof.
5.	Mr.YaduKrisna	ISE	Asst. Prof.
6.	Mr.Ashok B P	MCA	Asst. Prof.
7.	Ms. Sathya M	CSE	Asst. Prof.
8.	Ms. Bindyashree	ISE	Asst. Prof.
9.	Ms.S.Vidhya	ISE	Asst. Prof.
10.	Ms. Shruthi K	CSE	Asst. Prof.
11.	Ms. Lenish Pramiee V	CSE	Asst. Prof.
12.	Mr.Dharmaveer	MCA	Asst. Prof.
13.	Ms. Asha Kumari A	CSE	Asst. Prof.
14.	Ms.Sathya	CSE	Asst. Prof.

CHILDREN'S EDUCATION SOCIETY

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CERTIFICATE OF PARTICIPATION

This is to Certify that Ms. S.Vidhya Department of ISE, has participated in the 2 weeks Faculty Development Program titled "Advancements in Artificial Intelligence and Machine Learning" organized by The Oxford College of Engineering from 14th to 26th November 2022 .

Dr.R.KANAGAVALLI
COORDINATOR
HoD-ISE, TOCE

Dr.N.KANNAN
PRINCIPAL
TOCE

Day 1: 14th November 2022

Session 1: (9:30 AM to 11:30AM) Inaugural function

The FDP has aim and focus that all the participants should acquire the knowledge in the field of AI so the Inauguration began the invocation song in presence of college principal, Director, HODs and the participants. After that Chief Guest of the program has declared the opening of FDP.

Session 2: (2:00PM to 3:30 PM) Data Science by Dr.R.Ch.Naidu Professor and HoD/ CSE

In the session on Data Science, Dr.R.Ch.Naidu Professor and HoD/CSE covered overview and applications of deep learning. He explained that the exponential growth of business data, low-cost data storage, and Artificial Intelligence reaching maturity will lead to more businesses outsourcing their data center enter activities to cloud service providers. Also, the future of Machine Learning and Artificial Intelligence explains that while cloud brings agility to businesses, AI and ML will leave a major impact on business outcomes.

Day 2: 15th November 2022

Session 3: (9:30 AM to 11:30AM) Computer Vision by Dr.R.Kanagavalli Professor&HoD/ISE

In the session of computer vision the speaker focused on the basics, applications of the computer vision. Speaker took us with deep learning approach for Covid-19 dataset and shown the hands-on with Koggle, Colab environment with iris dataset and explained image enhancement using image processing concept. Explained, how we can calculate performance metrics such as accuracy, True negative, true positive etc.

Session 4: (2:00PM to 3:30 PM) Genetic Algorithm by Dr.B.K.Manjunath Professor & HoD/BioTechnology

Swarm intelligence oversteps the intricate mechanisms governing evolution that genetic algorithms rely on. It is a field of artificial life that seeks to understand the collective behavior of animals, particularly insects, and to use this understanding for solving complex, nonlinear problems. Sir has made us to understand the swarm intelligence with optimization, algorithms, simulation with analogies.

Day 3 : 16th November 2022

Session 5: (9:30 AM to 11:30A**M) Natural Language processing by Dr.N.Kannan Principal/TOCE**

Natural language processing (NLP) refers to **the branch of computer science**—and more specifically, the branch of artificial intelligence or AI—concerned with giving computers the ability to understand text and spoken words in much the same way human beings can. Speaker has focused on the discourse ie ordering of statements. Sir has made the session very interesting and interactive with many examples.

Session 6: (2:00PM to 3:30 PM) Data Science by Dr.Puja Professor & HoD/MCA

Explanation made by the speaker was remarkable, he started the presentation from problem solving, machine computing and data science in multidisciplinary. Speaker also explained the technology transformation toward data science with applications. Speaker explained the proceeding for analytics ie understanding data for learning or analysis, participants were very happy to receive such information.

Day 4: 17th November 2022

Session 7: (9:30 AM to 11:30AM) Hands-on programming with Python by Mr.Chetan Adhikari

Python is a general purpose and high level programming language. We can use Python for developing desktop GUI applications, websites and web applications. Also, Python, as a high

level programming language, allows you to focus on core functionality of the application by taking care of common programming tasks. The simple syntax rules of the programming language further makes it easier for us to keep the code base readable and application maintainable.

To make audience aware with python programming, hands-on session was organized by Mr.Chetan Adhikari, IT consultant, TCS Bangalore. He explained with dataset and how to use python for data science, computer vision etc.

Session 8: (2:00PM to 3:30 PM) Learning Analytics by Dr.VanajaRoselin Professor/ISE

LEARNING ANALYTICS is the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs. Learning Analytics sits at the convergence of Learning (e.g. educational research, learning and assessment sciences, and educational technology), Analytics (e.g. statistics, visualization, computer/data sciences, artificial intelligence). The speaker had explained with education data (teaching/learning), how to predict the no of failure students etc. Sir's insight knowledge on the topic made the participants to understand the analytic tools and how to use it.

Day 5: 18th November 2022

Session 9: (9:30 AM to 11:30AM) Human computer Interaction using Machine Learning by Dr.SaravanaKumar Professor/CSE

Now a day many applications such as medical systems require human computer interfacing. Speaker knowledge related to HCI explained it with medical imaging applications. The speaker had explained with Brain computing interaction.

Session 10: (2:00 PM to 3:30PM) Hands-on session in Brain computing by Dr.SaravanaKumar Professor/CSE

The session was continued by the speaker on the topic brain computing for the human computer interfacing. Sir had taken hands-on session in which he had demonstrated the component to check the brain reading and shown the signals as the graph.

Day 6: 19th November 2022

Session 11: (9:30 AM to 11:30AM) Meta Heuristic Search Techniques Dr.Nirmala/ Associate Professor/CSE

The Resource person have discussed about the importance of Meta Heuristic Search Techniques in machine learning and Artificial intelligence in today's life. Under this concept definition, importance & applications of Meta Heuristic Search Techniques in machine learning and Artificial intelligence are discussed

Session 12: (2:00 PM to 3:30PM) Optimization concepts and Machine learning R.Kanagavalli Professor&HoD/ISE

Session deliverd by resource person explained what are Optimization concepts and Machine learning and their applications to decision tree with a clear definition, Decision Trees Terminologies, prunning, branching, parent / child node, splitting, root node, leaf node.

Day 7: 21st November 2022

Session 13: (9:30 AM to 11:30AM) Uninformed Search techniques and their applications Dr.Naidu Professor&HoD/CSE

Uninformed search, also known as blind search, is a search algorithm that explores a problem space without any specific knowledge or information about the problem other than the initial state and the possible actions to take. It lacks domain-specific heuristics or prior knowledge about the problem. Uninformed search algorithms, such as breadth-first search and depth-first search, systematically explore the search space by applying predefined rules to generate successor states until a goal state is found or the search is exhausted. These algorithms are typically less efficient than informed search algorithms but can be useful in certain scenarios or as a basis for more advanced search techniques.

Session 14: (2:00 PM to 3:30PM) Heuristic Search Strategies and optimization concepts Dr.VanajaRoselin Professor/ISE

The Resource Person has explained the implementation and classification of Heuristic Search Strategies and optimization techniques. It includes Blind Search, Uninformed Search, and Blind control strategy. These search techniques are not always possible as they require much memory and time. These techniques search the complete space for a solution and use the arbitrary ordering of operations.

Day 8: 22nd November 2022

Session 15: (9:30 AM to 11:30AM) Deep Learning Models of feed forward networks Mr.Ayush/Software Engineer/Eurofin

A session is taken by the resource person on deep Learning using Statistical Analytics with R Tools. Python Tools for deep Learning. Sir explained why R is one of the major languages for data science.

Session 16: (2:00 PM to 3:30PM) Informed Search Techniques and their Applications with case studies Ms.Varsha Lokesh/Software Engineer/Infosys

In the session conceptual analysis of Informed Search Techniques In Artificial Intelligence for choosing the right number of clusters procedure is addressed.

Day 9: 23rd November 2022

Session 17: (9:30 AM to 11:30AM) Difference between informed and uninformed search techniques Dr.Puja/Professor &HoD/MCA

A session is taken by the resource person and addressed about theDifference between informed and uninformed search techniques in data mining.

Session 18: (2:00 PM to 3:30PM)A* Search Algorithm in AI applications Dr.Puja/ Professor &HoD/MCA

In this session the Resource person explained about A* Search Algorithm in AI applications and process to build classification models and evaluation of performance. An Introduction To The powerful search algorithm', you will be dealing with the A* algorithm, which is a search algorithm that finds the shortest path between two points. It will be used for the shortest path finding. It is an extension of Dijkstra's shortest path algorithm

Day 10: 24th November 2022

Session 19: (9:30 AM to 11:30AM) Heuristic Search Techniques & Hill Climbing in AI Ms. Kokila AP/ISE

The speaker has discussed about Heuristic Search Techniques & Hill Climbing in AI and unsupervised machine learning algorithms in solving real time problems. In contrast to traditional supervised machine learning algorithms, how these algorithms attempts to classify data without having first been trained with labeled data. Once the algorithm has been run and the groups are defined, any new data can be easily assigned to the most relevant group

Session 20: (2:00 PM to 3:30PM) Challenges and Research Domains in A.I., Dr.Preetha Sharan Dean reasearch/TOCE

Implementation of Machine / Deep Learning using different tools like keras tensorflow pytorch numpy scipy openCV is explained using Cloud. In this session we Configuration: GPU Based Remote System is explained

Day 11: 25th November 2022

Session 21: (9:30 AM to 11:30AM) Working with Anaconda Platform, Implementation of Searching Algorithms in Python Ms.Visalini/AP/ISE

Because of rapid advancements, massive amounts of talent and resources are dedicated to accelerating the growth of the technologies. in this session list of 8 best open source AI technologies are shown to take machine learning projects to the next level. in these few are explained

Session 22: (2:00 PM to 3:30PM) Machine Learning and Research Dimensions, Supervised and Unsupervised Learning Dr.Shobha/Associate Professor/CSE

In this session machine learning and transfer functions in keras are shown. Linear and Nonlinear Activation Function is shown. Different images having encoding in spatial domain instead of Frequency domain.

Day 12: 26th November 2022

Session 23: (9:30 AM to 11:30AM) Working with WEKA, Implementation of Machine Learning Algorithms in WEKA Dr.Seema/Associate Professor/CSE

WEKA offers converters to convert the files and Databases and windows databases, Sparse ARFF files, Generating random datasets are discussed. How to download unique datasets, unique datasets and problems, Random Forest approach, are discussed.

Session 24: (2:00 PM to 3:30PM) Valedictory Function

In valedictory session, number of participants was approximately 50 along with Principal of the oxford college of Engineering, Bangalore. Many participants have given the feedback and suggestions for the speakers and overall FDP.

Outcome:

All the sessions were very much informative. The discussed areas are of great benefit for the participants. Participants were enlightened by learning various AI&ML techniques and gained practical knowledge in Hands-on session in this domain. On the whole the FDP received a lotof positive feedback from participants and it paved the way for participants to to understand their strength and weakness and to work more specific on skill sets needed to become effective facilitators for learning.

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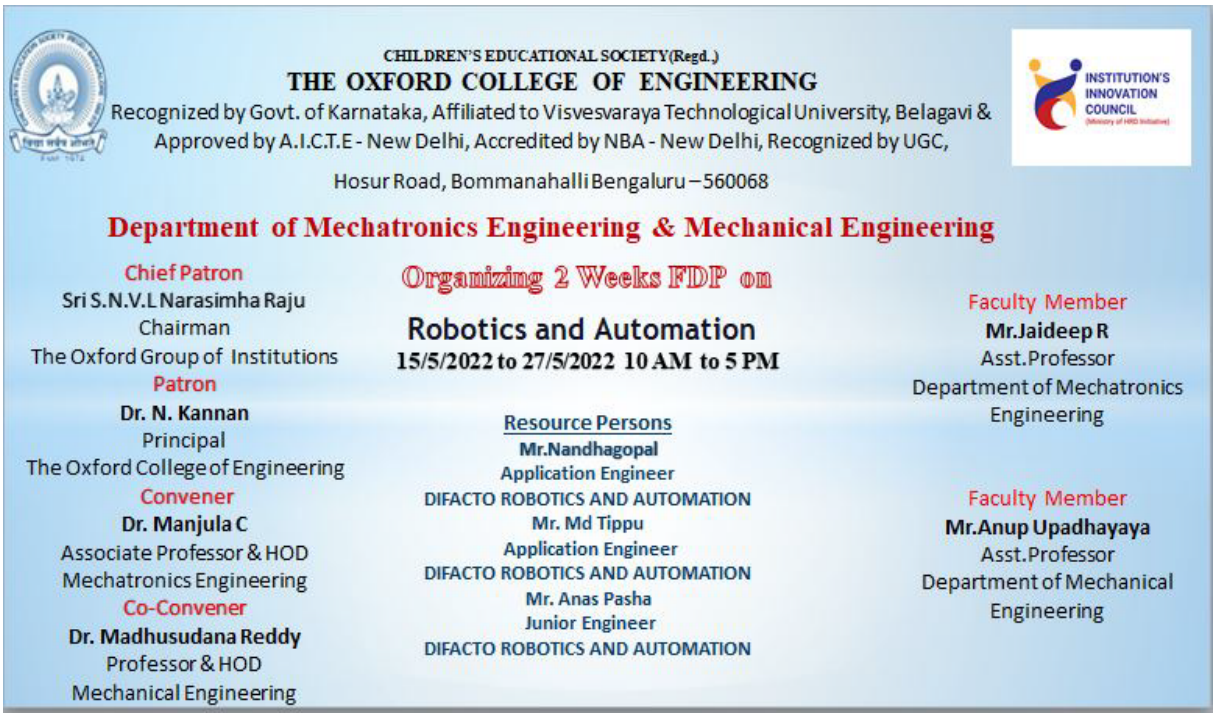
DEPARTMENT OF MECHATRONICS ENGINEERING

2 Weeks FDP on "Robotics and Automation"



Department of **Mechatronics Engineering & Mechanical Engineering** The Oxford college of Engineering, Bangalore organized 2 weeks FDP on **"Robotics and Automation".**

Robotics is a branch of engineering that involves the conception, design, manufacture and operation of robots. The objective of the robotics field is to create intelligent machines that can assist humans in a variety of ways. Robotics can take on a number of forms.

Schedule of the FDP

Week 1

Day/dates	Session	Resource person	content
Day 1 15/5/2022	FN	Mr. Nandhagopal Application Engineer	Welcome Speech Introduction To Robotics And Automation
	AN	Mr. Tippu Application Engineer	Basics Of Robotics (Jogging Operations) J1 To J3 (Linear Movements)
Day 2 16/5/2022	FN	Mr. Nandhagopal Application Engineer	Basics Of Robotics (Jogging Operations) J1 To J6 (Rotary Movements)
	AN	Mr. Tippu Application Engineer	Hands On Jogging Operations
Day 3 17/5/2022	FN	Mr. Nandhagopal Application Engineer	Explanation Of Program
	AN	Mr. Tippu Application Engineer	Explanation Of Program
Day 4 18/5/2022	FN	Mr. Nandhagopal Application Engineer	Entering The Program In Teach Pendent.
	AN	Mr. Tippu Application Engineer	Entering The Program In Teach Pendent.
Day 5 19/5/2022	FN	Mr. Anas Pasha junior Engineer	Saving, Running And Executing
	AN	Mr. Tippu Application Engineer	Debugging Of Programme
Day 6 20/5/2022	FN	Mr. Anas Pasha junior Engineer	Understanding The Concepts And Performing Small Operations.

	AN	**Mr. Tippu Application Engineer**	**Understanding The Concepts And Performing Small Operations.**

Week 2

Day/dates	**Session**	**Resource person**	**content**
Day 1 22/5/2022	**FN**	**Mr. Anas Pasha junior Engineer**	**Performing Hands Operations**
	AN	**Mr. Tippu Application Engineer**	**Box Operation Triangular Operation**
Day 2 23/5/2022	**FN**	**Mr. Anas Pasha junior Engineer**	**Box Operation Triangular Operation**
	AN	**Mr. Tippu Application Engineer**	**Box Operation Triangular Operation**
Day 3 24/5/2022	**FN**	**Mr. Anas Pasha junior Engineer**	**Cuboid Operation Two Layer Cuboid Operation**
	AN	**Mr. Tippu Application Engineer**	**Cuboid Operation Two Layer Cuboid Operation**
Day 4 25/5/2022	**FN**	**Mr. Nandhagopal Application Engineer**	**Two Layer Triangular Operation Cuboid Operation**
	AN	**Mr. Anas Pasha junior Engineer**	**Two Layer Triangular Operation Cuboid Operation**
Day 5 26/5/2022	**FN**	**Mr. Nandhagopal Application Engineer**	**Two Layer Triangular Operation Cuboid Operation**
	AN	**Mr. Anas Pasha junior**	**Two Layer Triangular**

		Engineer	**Operation** **Cuboid Operation**
Day 6 **27/5/2022**	**FN**	**Mr. Nandhagopal** **Application Engineer**	**Automation Using The Performed Operations**
	AN	**Mr. Anas Pasha junior Engineer**	**Doubt Clarifications** **Thanks Giving.**

Faculties Attended

Mechatronics Engineering

1) Dr.Manjula C
2) Dr.Madhura S
3) Ms.Seema V
4) Mr.Jaideep R
5) Ms.Annu kumari

Mechanical Engineering

1) Dr.Madhusudana Reddy
2) Dr.Vidyadhar Pujar
3) Dr.Prasad Nayak
4) Dr. Ravi Prakash
5) Mr. T V Nagaraj
6) Mr. Ragavendhra
7) Mr. Anup Upadhayaya

Objective:

The objective of the session is to bring the awareness about Industrial automation and robotics are the use of computers, control systems and information technology to handle industrial processes and machinery, replacing manual labour and improving efficiency, speed, quality and performance.

During the session the resource person explained about the its applications and highlightened the points.

- Robotics involves the design, construction, operation, and use of robots.
- The goal of robotics is to design machines that can help and assist humans.
- The term Robotic Process Automation (RPA) brings the image of physical robots performing labor-intensive activities, like cleaning a house, lifting heavy objects, doing every work as a human worker.
- The application of technology, programs, robotics or processes to achieve outcomes with minimal human input.

Benefits of Automation

- Lower operating costs.
- Improved worker safety.
- Reduced factory lead times.
- Faster ROI.
- Ability to be more competitive.
- Increased production output.
- Consistent and improved part production and quality.
- Smaller environmental footprint.

Industrial Robot Applications

- Arc Welding. Arc welding, or robot welding.
- Spot Welding.
- Materials Handling.
- Machine Tending.
- Painting.
- Picking, Packing and Palletizing.
- Assembly.
- Mechanical Cutting, Grinding, Deburring and Polishing.

Future of Robotics and Robots

- We can expect to see more significant numbers of increasingly sophisticated robots incorporated into more areas of life, working with humans.
- Contrary to dystopian-minded prophets of doom, these improved robots will not replace workers.

Photos




On day 1 for noon session welcome speech and introduction of Robotics and its design, construction, operation, and use of robots and computer systems for their control, sensory feedback, and information processing. Afternoon session , jogging operations was taken and hands on was also conducted.

On day 2 forenoon session J4 to J6 was conducted and explained the linear and rotary motions

was taught well , in afternoon session complete J1 to J6 hands was taken.

On day 3 both the session explanation of program was explained in detail method.

On day 4 entering the program in teach pendent was taught for both the sessions.

On day 5 morning session Saving, Running And Executing was explained to all. And afternoon session debugging of program was taught.

On day 6 Understanding The Concepts And Performing Small Operations was explained for both the sessions.

On day 7 Performing Hands Operations of small operations using J1 to J6 was performed.

On day 8 Box Operation and Triangular Operation was taught to the faculties for both the sessions.

On day 9 Cuboid Operation and Two Layer Cuboid Operation was taught to the faculties for both the sessions.

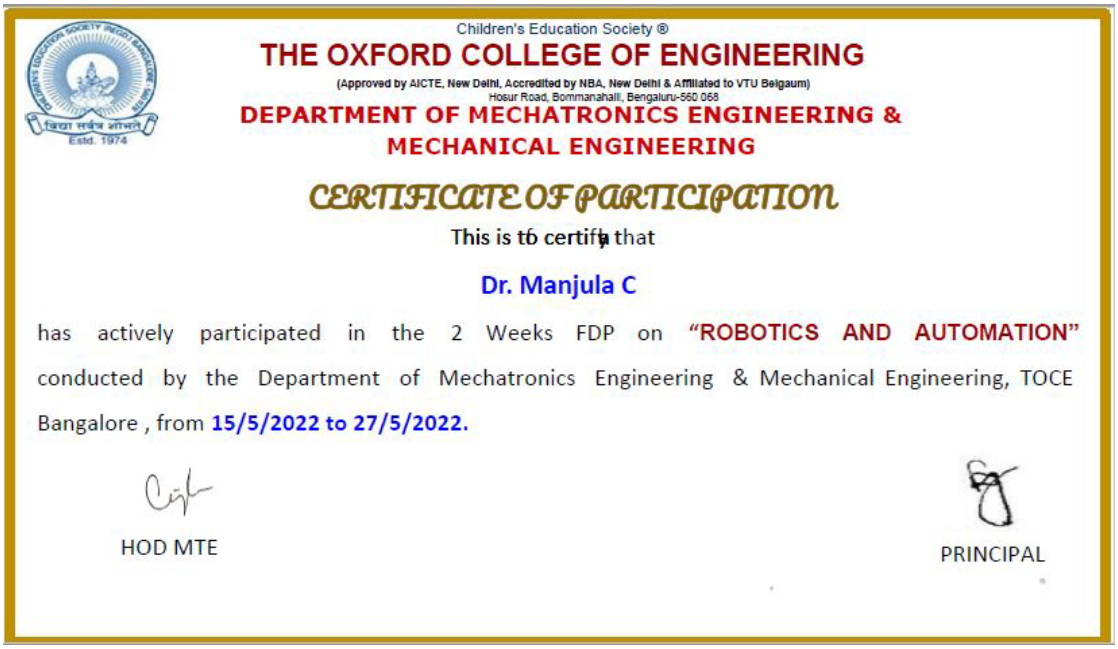
On day 10 and 11 Two Layer Triangular Operation Cuboid Operation was taught to the faculties for both the sessions.

On day 12 forenoon session on automation was explained and afternoon session doubts and vote of thanks was given.

Outcome:

- One Of The Top Ways Educational Robotics Can Benefit Learning Outcomes Is By Promoting Creative Problem Solving Skills.
- Problem-Based Learning Is A New Learning Model That Promotes Creative Problem-Solving With The Use Of A Robot In Lieu Of An Actual Teacher.
- The Case For Robotics And Automation In Construction Is Sound; The Need For Productivity Gains, Horizontal Integration Of Construction Processes
- The Pragmatism Of Modularization And The Growing Challenge Of Finding Skilled Labour Collectively Point To Increased Use Of Automation

Sample certificate



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DEPARTMENT OF MECHATRONICS ENGINEERING & MECHANICAL ENGINEERING

CERTIFICATE OF PARTICIPATION

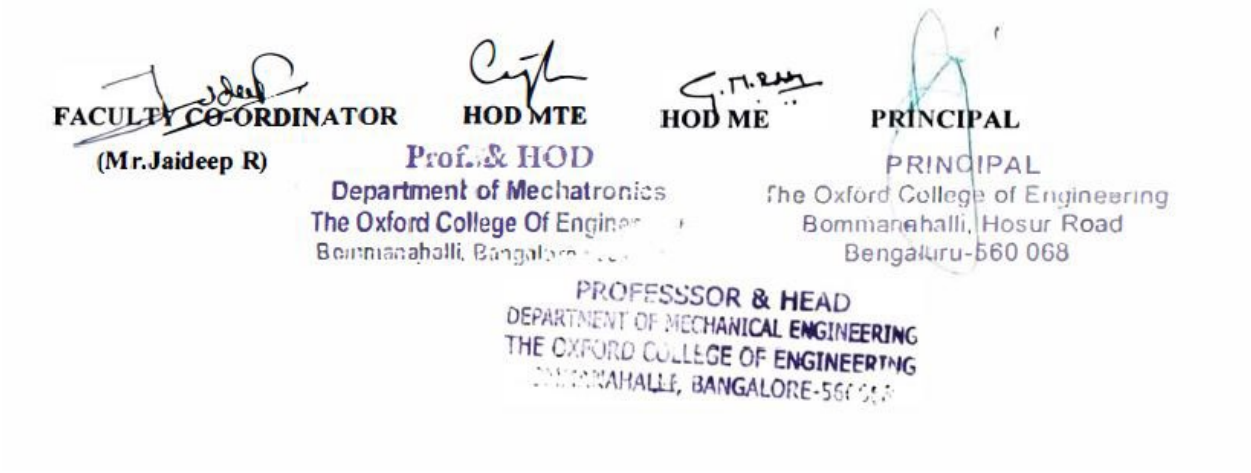
This is to certify that

Dr. Manjula C

has actively participated in the 2 Weeks FDP on "ROBOTICS AND AUTOMATION" conducted by the Department of Mechatronics Engineering & Mechanical Engineering, TOCE Bangalore , from 15/5/2022 to 27/5/2022.

HOD MTE

PRINCIPAL



FACULTY CO-ORDINATOR (Mr.Jaideep R)

HOD MTE

Prof. & HOD
Department of Mechatronics
The Oxford College Of Engineering
Bommanahalli, Bangalore

HOD ME

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PROFESSSOR & HEAD
DEPARTMENT OF MECHANICAL ENGINEERING
THE OXFORD COLLEGE OF ENGINEERING
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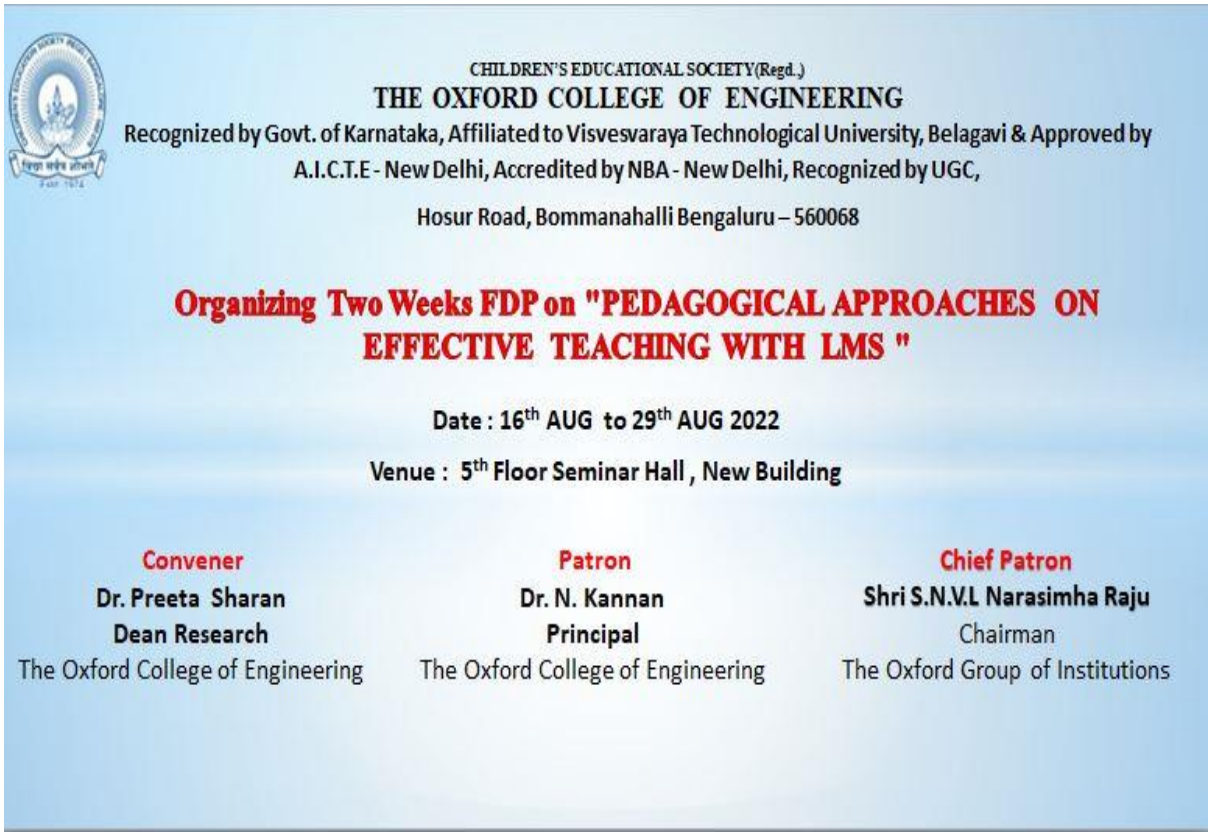
REPORT ON

2 Weeks FDP on Pedagogical Approaches on Effective Teaching with LMS

Aug 16-29, 2022

2 Weeks Faculty Development Program on Pedagogical Approaches on Effective Teaching with LMS was organized at The Oxford College of Engineering from Aug16, 2022 to Aug29, 2022 in association with Skill development lab. Faculty training and pedagogy sessions provide a platform for improving teaching learning outcomes.



Technology-based teaching and discussion forums are essential tools that can improve student-to-teacher interaction. This FDP consists of lecture sessions, case studies, panel discussions, group activities and Hands – on session. It tries to bring faculty under an umbrella to share the best practices in teaching and learning.

Faculty Development Program Inauguration

Dr. Vanaja Roselin E. Chirchi, Professor, ISE department hosted the inauguration program began with a Welcome speech by Dr. Manju Devi, Professor and Head ECE department welcomed all the respected dignitaries and participants. Hon. Principal Dr. N Kannan shared his inaugural speech about the FDP. Sir has shared his views with the faculty members to focus on increasing learning outcomes by making use of innovative practices and ICT tools. Dr. Vijaya Kumari, Dean of Academics emphasized the benefits of FDP and explained the importance of skills.

Objectives:

The main objective of this program is to focuses on enabling faculty to understand their strength and weakness and to work more specific on skill sets needed to become effective facilitators for learning. The FDP helps faculty to focus on increasing learning outcomes by making use of innovative practices and ICT tools.

Benefits:

Enabling faculty to become more effective in classroom teaching, curriculum framing, and practicing innovative assessment techniques. Motivating faculty to understand the importance of coexistence of teaching as well as research for achieving academic excellence. Improving social skills necessary for collaboration, professional growth, personnel management, and leadership. Understanding the importance of getting outside institute exposure and transferring them to their students.

Participants Attended

The FDP was attended by 30 participants from various departments of The Oxford College of Engineering.

List of Faculties registered for 2 week FDP

SL NO	Name of Faculty	Department	Designation
1.	Mrs. Leela R Rahini	PHY	Asst. Prof.
2.	**Mr. Ashok B P**	MCA	Asst. Prof.
3.	**Ms. Kavya S Kallimani**	Civil	Asst. Prof.
4.	Ms. Gayathri T	Civil	Asst. Prof.
5.	Mrs. Nisha C Rani	EEE	Asst. Prof.
6.	**Mr. JC Achutha**	MCA	Asst. Prof.
7.	Mr. Bheemeswara Reddy V	MBA	Asst. Prof.
8.	Dr. Varun K R	MECH	Asst. Prof.
9.	Ms.Seema V	MT	Asst. Prof.
10.	Mr. Anup M Upadhyaya	MECH	Asst. Prof.
11.	Mrs. Moumita Chatterjee	MATHS	Asst. Prof.

12.	Ms. Lenish Pramiee V	CSE	Asst. Prof.
13.	Ms. Lavanya B S	MATHS	Asst. Prof.
14.	Ms. Asha Kumari A	CSE	Asst. Prof.
15.	Dr. Raghu R	CSE	Asst. Prof.
16.	Ms. Sathya M	CSE	Asst. Prof.
17.	Ms. Shruthi K	CSE	Asst. Prof.
18.	Mr. Karthik S L	ISE	Asst. Prof.
19.	Ms. Vidhya S	ISE	Asst. Prof.
20.	Mrs. Indu K S	ISE	Asst. Prof.
21.	Mr. Prajwalasimha S N	ECE	Asst. Prof.
22.	Dr. Laya Tojo	ECE	Asst. Prof.
23.	Ms. Iffat Fathima	ECE	Asst. Prof.
24.	Ms. Salma Kausar M	BT	Asst. Prof.
25.	Mrs. Selastina Mary A	MATHS	Asst. Prof.
26.	Dr. Indulekha John	BT	Asst. Prof.
27.	Dr. Shipra Bhati	CHEM	Asst. Prof.
28.	Mr. Pradeep C	MECH	Asst. Prof.
29.	Mr. Jaideep Rukmangadan	MT	Asst. Prof.
30.	Ms. Resna S R	EEE	Asst. Prof.

Schedule and the Resource person

The introduction to the Resource Person was given by Dr. A Chrispin Jiji, Associate Professor, and Department of ECE.

2-Week FDP Schedule with Resource Persons
(16/08/2022 -29/08/2022)
Week-1

FN: 10 AM to 12AM **AN: 2PM to 4PM**

Days/Dates	Session	Resource Person	Content
Day1 16/8/22	FN	**Dr.N.Kannan,** Principal, The Oxford College of Engineering, Bangalore	Introduction to the 2-week FDP , IPCC & Non-IPCC Briefing
	AN	Dr.R.Kanagavalli, Prof.& HOD, Dept. of ISE , TOCE	Course Outcome, Revised Bloom's Taxonomy Level
Day2 17/08/2022	FN	Dr. Manju Devi, Prof.& HOD, Dept. of ECE, TOCE	Lesson Plan, CO-PO Mapping, Pos with hands-on for theory and labs
	AN	Dr.Vijaya Kumari, Dean Academics, TOCE	Pedagogical Approaches for effective teaching
Day3 18/08/2022	FN	Dr.Malleshiah, Prof. & HOD, Dept. of Civil Engineering, TOCE	Smart Board usage with its significance
	AN		Hands-on Session on usage of smart board
Day4	FN	Dr.Madhusudan Reddy, Prof. & HOD, Dept. of	Importance of Human values in Teaching & Learning

19/08/2022	AN	Mechanical Engineering, TOCE	Activities conducted for participants
Day5 20/08/2022	FN	Dr.Mallikarjun, Dean Exam, TOCE	Evaluation methods for CIE & SEE
	AN	Dr.Bharath B S, Prof. & HOD, Dept. of EEE,TOCE	Setting of QP with RBT Level
Day6 22/08/2022	FN	Dr.Manjunath, Prof. &HOD, Dept. of Biotechnology	Schema Rubrics for theory & lab
	AN	Dr.C H Naidu, Prof. & HOD, Dept. of CSE,TOCE	Attainment
Week-2 (LMS)			
Day1 23/08/2022	FN	Dr.Tarakrama Reddy, Prof.& HOD, Dept. of MBA,TOCE	JUNO- How to Entering details – personal, Journal publications etc. and its significance.
	AN	Dr.Saravanan,Prof. Dept.of CSE,TOCE	Course File in JUNO
Day2 24/08/2022	FN	Dr.Puja Shashi, Prof.& HOD, Dept. of MCA, TOCE	Internal and External Attainment in JUNO
	AN	Dr.Devi Vigneshwari, Assoc.Prof. Dept. of EEE	CIE-Evaluation & Marks Entry
Day3 25/08/2022	FN	Dr.Raju B R, Prof. &HOD, Dept.of Automobile Engineering	Importance of Mentoring &Counseling
	AN		Hands –on JUNO for Mentoring
Day4 26/08/2022	FN	Dr.Manjula, Assoc. Prof. & HOD, Dept. of Mechatronics Engineering	CO-PO mapping for theory and labs
	AN	Dr.BinduMadhavi ,Prof. & HOD, Dept. of AIML,TOCE	Students attendance and Leave Management
Day5 27/08/2022	FN	Dr. Gangavathy , HOD – S&H,TOCE	Time Table Management-theory & Practical
	AN	Dr.Preeta Sharan ,Dean R&D	Research Findings &Publications
Day6 29/08/2022	FN	Dr.VijayaKumari, Dean Academics, TOCE	Discussion & Feedback
	AN	Valedictory session	

After successful completion of the 2-Week FDP, the participants have got the participant certificate.

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Participation Certificate

This is to certify that **Mr. Channappa Gowda** Assistant Professor Department of ISE has participated in the 2 - Weeks FDP Titled "PEDAGOGICAL APPROACHES ON EFFECTIVE TEACHING WITH LMS " Organized by The Oxford College Of Engineering from 16/8/2022 to 29/8/2022

Convener
Dr. Preeta Sharan
Dean Research
The Oxford College of Engineering

Dr. N. Kannan
Principal
The Oxford College of Engineering

On Week 1, Day 1 the keynote address was delivered by Dr. N Kannan, Principal, The Oxford College of Engineering, and Bangalore. In his talk he briefed about the topic Introduction to the 2-week FDP, IPCC & Non-IPCC. The next session was conducted by Dr. R Kanagavalli, Professor& Head, Department of ISE, The Oxford College of Engineering, Bangalore. Mam spoke on the topic Course Outcome, Revised Bloom's Taxonomy Level.

On Day 2 the session was delivered by Dr. Manju Devi, Professor & Head, Department of ECE, The Oxford College of Engineering, Bangalore. In her talk mam briefed about the topic Lesson Plan, CO-PO Mapping, Pos with hands-on for theory and labs. The next session was conducted by Dr. Vijaya Kumari, Dean of Academics, The Oxford College of Engineering, Bangalore. Mam spoke on the topic Pedagogical Approaches for effective teaching

On Day 3 the session was delivered by Dr.Malleshiah, Prof. & HOD, Dept. of Civil Engineering, The Oxford College of Engineering, Bangalore. Sir briefed about the topic

Smart Board usage with its significance. Followed by the Hands-on Session on usage of smart board.

On Day 4 the session was delivered by Dr.Madhusudan Reddy, Prof. & HOD, Dept. of Mechanical Engineering, The Oxford College of Engineering, Bangalore. Sir briefed about the Importance of Human values in Teaching & Learning. Followed by the Hands-on Session on various activities for participants.

On Day 5 the session was delivered by Dr.Mallikarjun, Dean Exam, The Oxford College of Engineering, Bangalore. In his talk sir briefed about the topic Evaluation methods for CIE & SEE. The next session was conducted by Dr. Bharath B S, Professor & Head, Department of EEE, The Oxford College of Engineering, Bangalore. Sir spoke on the topic Setting of QP with RBT Level

On Day 6 the session was delivered by Dr.Manjunath, Prof.& HOD, Dept. of Biotechnology, The Oxford College of Engineering, Bangalore. Sir briefed about the topic Schema Rubrics for theory & lab. The next session was conducted by Dr.C H Naidu, Prof. & HOD, Dept. of CSE,The Oxford College of Engineering, Bangalore. Sir spoke on the topic of CO-PO Attainment

On Week 2, Day 1 the session was delivered by Dr.Tarakrama Reddy, Prof.& HOD, Dept. of MBA, The Oxford College of Engineering, Bangalore. In his talk he briefed about the topic JUNO- How to Entering details –personal, Journal publications etc. and its significance. The next session was conducted by Dr.Saravanan,Prof. Dept.of CSE, The Oxford College of Engineering, Bangalore. Sir spoke on the topic How to do Course File in JUNO.

On Day 2 the session was delivered by Dr.Puja Shashi, Prof.& HOD, Dept. of MCA, The Oxford College of Engineering, Bangalore. In her talk mam briefed about the topic Internal and External Attainment in JUNO. The next session was conducted by Dr.Devi Vigneshwari, Assoc.Prof. Dept. of EEE, The Oxford College of Engineering, Bangalore. Mam spoke on the topicCIE-Evaluation & Marks Entry.

On Day 3 the session was delivered by Dr.Raju B R, Prof. &HOD, Dept.of Automobile Engineering, The Oxford College of Engineering, Bangalore. In his talk he briefed about the Importance of Mentoring & Counseling. Followed by Hands –on JUNO for Mentoring.

On Day 4 the session was delivered by Dr.Manjula, Assoc. Prof. & HOD, Dept. of Mechatronics Engineering, The Oxford College of Engineering, Bangalore. In her talk mam

briefed about the topic CO-PO mapping for theory and labs. The next session was conducted by Dr.BinduMadhavi,Prof.&HOD, Dept. of AIML, The Oxford College of Engineering, Bangalore. Mam spoke on the topic of Students attendance and Leave Management

On Day 5 the session was delivered by Dr. Gangavathy, HOD –S&H, The Oxford College of Engineering, Bangalore. In her talk mam briefed about the topic Time Table Management-theory & Practical. The next session was conducted by Dr.Preeta Sharan ,Dean R&D, The Oxford College of Engineering, Bangalore. Mam spoke on the topic Research Findings &Publications.

On Day 6 the session was delivered by Dr.VijayaKumari,Dean Academics, The Oxford College of Engineering, Bangalore. Mamdiscussed with the participants and got their feedback. The FDP was concluded by the valedictory function conducted on Day 12 afternoon 3.30pm. The session started with the welcome speech of Dr. A Chrispin Jiji, Associate Professor, Department of ECE. She gave a warm welcome to the gatherings and to the dignitaries. The overview of the FDP was delivered by Mrs. Jessy Janet Kumari, Assistant Professor, CSE Dept. The Principal Dr. N Kannan appreciated the effort of the organizing team in managing the FDP so well. Few Speakers and participants shared their wonderful experience. The valedictory function ended by the Vote of Thanks by Mr. Jaideep, Assistant Professor, Department of Mechatronics.

OUTCOME:

All the sessions were very much informative. The discussed areas are of great benefit for the participants. Participants were enlightened by learning various techniques and gained practical knowledge in Hands-on session in this domain. On the whole the FDP received a lot of positive feedback from participants and it paved the way for participants to to understand their strength and weakness and to work more specific on skill sets needed to become effective facilitators for learning.

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Website: www.theoxford.edu.

Academic year 2022 -23

Report on

Two Week FDP on"Recent Trends in Electrical & Electronics Engineering (17th April to 3rd May 2023)

The Faculty Development Program was conducted from 17.04.2023 to 03.05.2023(12 days) in an effective manner and was very successfully completed with the support and encouragement of our Management, Directors, Principal, Conveners and all the Head Of Departments, Co-ordinators. All the faculty members, students supported a lot to make this event successful which enhance the knowledge as well as brought the results of team work. All the sessions were conducted in offline mode in TOCE.

A two week Faculty Development Program (FDP) on Recent Trends in Electrical & Electronics Engineering was organized at the Department of Electrical and Electronics Engineering, The Oxford College of Engineering Bangalore from 17thApril 2023 to 3rdMay 2023 The main objective of this program is to make the participants aware of the recent trends in Electrical Engineering so that they can update their knowledge in this area and explore for further research. The objective also included that the knowledge gained and shared would help the faculties to guide students to pursue their career and research works. The FDP was attended by 31 faculty members of EEE, ECE, MTE, ISE &CSE.

Brochure of the 2 week FDP in Recent Trends in Electrical & Electronics Engineering

Inaugural Program of the Faculty Development Program

The FDP started with a formal inaugural session compered by Dr Devi Vighneshwari ,Associate Professor, Dept of EEE , with an invocation song by Rashmi(6^{th} sem EEE student). Dr. Bharath V S, Professor and Head of the Department of Electrical and Electronics Engineering extended a warm welcome to all the respected dignitaries and participants. He also shared his views about the Faculty Development Program and importance of attending such program for the enhancement of knowledge of the faculties and students Introduction to the Faculty Development Program was given by FDP coordinator,N Jayakumar ,Assistant Professor, Dept of EEE.He has highlighted the objectives of the FDP and briefed about the schedule of the program. He also gave a glimpse of the activities going on in EEE dept TOCE.

Objectives

The faculty development programme provides a proper platform to participate for discussion and presentation of the latest technologies and discoveries in the field of Electrical Engineering. This is a quality course providing forum for academicians and industrial professionals to exchange their knowledge and state of art of aforesaid areas. The course content will be taught by eminent experts in the field, having adequate teaching and industrial experience. This course will offer a unique opportunity to the researchers, academicians and students working in this area to acquire knowledge in current and relevant topics in Electrical Engineering. This FDP provides deeper insight and knowledge to the participants about the recent advances in Electrical Engineering field.

Benefits

This FDP aims at equipping the faculty with skills and knowledge that are essential for inculcating values in students and guiding and monitoring their progress towards professional career. From this FDP, faculty learn present technologies in the areas of renewable energy, electric transportation, power electronics, electric drives, control techniques, smart grids, communication protocols, intelligent charging infrastructure, VLSI ,Image processing and Embedded systems. In view of changing scenario under sustainable energy and electric transportation, this FDP aims to put together the speakers from these areas to discuss their knowledge and experience for the listeners to work in years to come. It will provide an

interactive forum for discussion on recent and on-going developments, key issues and challenges, and practices.

Participants Attended

The FDP was attended by 31 participants from various departments of The Oxford College of Engineering.

List of Faculties registered for two week FDP

SL No	Name	Designation	Name of the Institution
1.	Mrs Laya Tojo	Assistant Professor/ECE	TOCE,Bangalore
2.	Dr Chrispin Jiji	Assistant Professor/ECE	TOCE,Bangalore
3.	Mrs Iffat Fathima	Assistant Professor/ECE	TOCE,Bangalore
4.	Mr Jayaraj	Assistant Professor/ECE	TOCE,Bangalore
5.	Mrs Nisha C Rani	Assistant Professor/EEE	TOCE,Bangalore
6.	Mrs Resna S R	Assistant Professor/EEE	TOCE,Bangalore
7.	Mrs Sumitha T L	Assistant Professor/EEE	TOCE,Bangalore
8.	Mrs Raichel Ruby	Assistant Professor/EEE	TOCE,Bangalore
9.	Mr N Jayakumar	Assistant Professor/EEE	TOCE,Bangalore
10.	Dr Manjula C	Assoc Professor/MTE	TOCE,Bangalore
11.	Mr.Jaideep Rukumandan	Assistant Professor/MTE	TOCE,Bangalore
12.	Ms Seema V	Assistant Professor/MTE	TOCE,Bangalore
13.	Ms Annu Kumari	Assistant Professor/MTE	TOCE,Bangalore

14.	Mrs Sheeba Kumari	Assistant Professor/ECE	TOCE,Bangalore
15.	Mrs Vijaya Lakshmi	Assistant Professor/ECE	TOCE,Bangalore
16.	Mrs Sandhya Rai	Assistant Professor/EEE	TOCE,Bangalore
17.	Mrs Nalina Kumari	Assistant Professor/EEE	TOCE,Bangalore
18.	Mrs Ramya Bharati	Assistant Professor/ECE	TOCE,Bangalore
19.	Dr Someswari T	Assistant Professor/EEE	TOCE,Bangalore
20.	Mrs Tina	Assistant Professor/ECE	TOCE,Bangalore
21.	Mrs.Sowmya Padukone	Assistant Professor /ECE	TOCE,Bangalore
22.	Mrs Sreelatha B	Assistant Professor/ECE	TOCE,Bangalore
23.	Mr Prajwal Sinha	Assistant Professor/ECE	TOCE,Bangalore
24.	Mrs Indu KS	Assistant Professor /ISE	TOCE,Bangalore
25.	Dr.Devi Vighneshwari	Assoc Prof./EEE	TOCE,Bangalore
26.	Mrs Vishalini	Assistant Professor /ISE	TOCE,Bangalore
27.	Mr Yadu Krishnan	Assistant Professor /ISE	TOCE,Bangalore
28.	Mr Karthik	Assistant Professor /ISE	TOCE,Bangalore
29.	Mr.Channappa Gowda	Assistant Professor /ISE	TOCE,Bangalore
30.	Mrs. Asha Kumari A	Assistant Professor /CSE	TOCE,Bangalore
31.	Mrs Preeja	Assistant Professor /ISE	TOCE,Bangalore

Schedule and the Resource person

The schedule and the Resource people for the Two week FDP on Recent in Electrical & Electronics Engineering (17th April to 3rd May 2023) is given below.

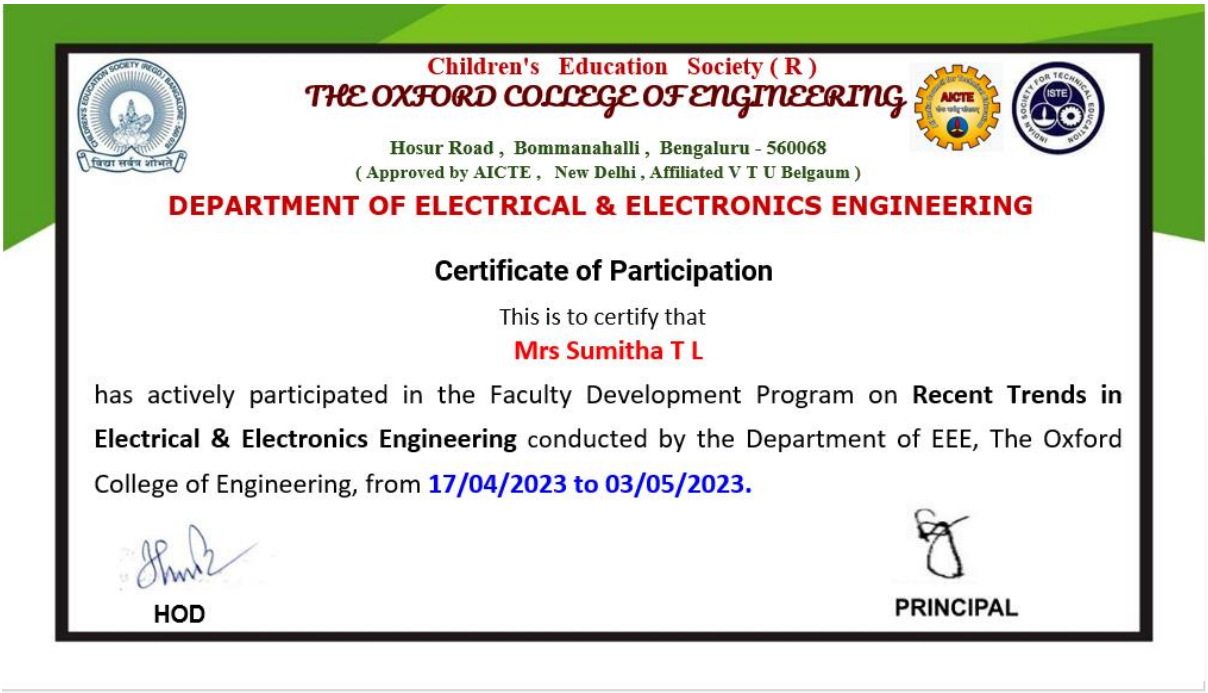
DAY & DATE / TIME	**TIME**		
	10:30 AM– 12:30 PM		**AN [1:30PM – 3:00 PM]**
Day – 1 **17-04-23** **Monday**	Inauguration	Key Note Address – PV Wind – Micro grid Present Scenario Dr.Vidhya, HOD/ EEE, Amrita, Bangalore	Introduction To Micro Grids Dr.Mahesh K Professor, Dept of EEE Sir MVIT,Bangalore
Day – 2 **18-04-23** **Monday**	Nonlinear Control of Power Converters in Micro grid Dr.Tousif Khan, HOD/ EEE, SRM Institute, Andra Pradesh		Hands on Training on Various Controllers Mr.Uday Bhargav, Gened Technologies, Bangalore

Day – 3 **19-04-23** **Tuesday**	Critical comparison of DC-DC converters for renewable Energy applications Dr.Prema V, Associate Prof, Dept of EEE, BMSCE, Bangalore	Hands-on session on simulation of power converters using KiCAD software (open source) Dr.Prema V, Associate Prof, Dept of EEE, BMSCE
Day – 4 **20-04-23** **Wednesday**	Modeling and control of DFIG based wind energy conversion systems Dr. Srikanth Velpula Assistant Professor, KITS, Warngal	Recent Trends in VLSI technologies an Automotive Perspective. Mr Sivaramasubramanian Narayanan,Hardware Technical expert Robert Bosch Engineering and Business Solutions Bangalore
Day – 5 **21-04-23** **Thursday**	Research Opportunities in Solar PV Systems Mr.B. Pradeep Kumar,Assistant Prof KITS, Warangal	Modelling of Solar PV Systems in MATLAB Mr.B. Pradeep Kumar,Assistant Prof KITS, Warangal
Day – 6 **24-04-23** **Monday**	Application of Soft Computing Techniques for Daylight Harvesting Dr.Shreyl Grace Prof, Dept of EEESt Joseph Engineering College, Mangalore	Challenges in Micro grid Interfacing with Grid Dr.Ramesh P. Associate Prof, Dept of EEE, CMRIT, Bangalore

Day – 7 **25-04-23** **Tuesday**	An Overview of Electric Vehicles Dr V S Bharath ,Professor/HOD, Dept of EEE, TOCE ,Bangalore	Electric Vehicles – A transformation to Ecofriendly Mobility Mr Bharath , Manager Sour Urja Vehicle Challenge.
Day –8 **26-04-23** **Wednesday**	Power Converters for Electric Vehicles Mr N Jayakumar ,Assistant Professor, Dept of EEE, TOCE ,Bangalore	An overview of EV (2W), BMS & Importance Of Li-ion Batteries & it's effect on various Parameters Ms Srilekha N, Electronics Engineer, Orxa Energies | High performance EVs and Battery solutions
Day –9 **27-04-23** **Thursday**	Embedded System Challenges and Electrical Applications in Automotive. Mr Shamin Dudu TS ,General Manager, Power train Emobility, Robert Bosch Engineering and Business solutions Ltd Bangalore	Hands-on Arduino – Introduction to arduino and its programming in IDE Dr Devi Vighneshwari ,Professor/HOD, Dept of EEE, TOCE ,Bangalore
Day –10 **28-04-23** **Friday**	Image processing techniques applied to Optic disk.. Dr. Vijaya Kumari, Dean Academics The Oxford College of Engineering	Recent Trends in Photnics . Dr Preeta sharan , Dean R&D , The Oxford College of Engineering

Day –11 **02-05-23** **Tuesday**	Design and Development -Prototyping on Electronic Products Mr Krishna Das Engineering Manager, Bosch Sample Shop Bosch Global Software Technologies Ltd, Coimbatore	Silicon Carbide-Insights to an Emerging Technology in the field of Power Electronics Engineering Group Manager at Bosch Engineering and Business Solutions Bengaluru	
Day –12 **03-05-23** **Wednesday**	Recent Advancements in Electrical Power and Energy System. Dr K Ravi, Professor, Department of Electrical Engineering , VIT University ,Vellore	Emerging Trends and Applications of Multilevel Inverters in power Electronics. Dr Y R Manjunatha Professor (Former Chairman) Department of studies in Electrical Engineering ,UVCE, Bangalore	Valedictory Function.

After successful completion of the 2-Week FDP, the participants have got the participant certificate.



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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that

Mrs Sumitha T L

has actively participated in the Faculty Development Program on **Recent Trends in Electrical & Electronics Engineering** conducted by the Department of EEE, The Oxford College of Engineering, from **17/04/2023 to 03/05/2023.**

HOD

PRINCIPAL

Key Note Address was delivered by : Dr.Vidhya, HOD/ EEE, Amrita, Bangalore

on "PV Wind – Micro grid Present Scenario ". Mrs Nisha C Rani, Assistant Professor ,EEE dept has delivered the welcome speech and introduction about the resource person. The resource person has explained about present scenario in PV Wind micro grid system. At the end of the session, Mr. N Jayakumar, Associate Professor, Dept, of EEE,delivered vote of thanks to the resource persons and all the participants. The second session on Day 2 was Introduction To Micro Grids by Dr.Mahesh K,Professor, Dept of EEE Sir MVIT,Bangalore 1:30 PM - 3:30 PM. .Dr Mahesh has spoke about microgrids.A microgrid is a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid. A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island mode."The welcome address and vote of thanks to the resource person and all the participants was done by Mr.N Jayakumar ,Associate Professor ,EEE department.

Dr.Prema V, Associate Prof, Dept of EEE, BMSCE, Bangalore has given Critical comparison of DC-DC converters for renewable Energy applications . The sessions included detailed explanation about wind energy conversion systems and its controls. Also he has detailed about the performance of Wind energy Conversion Systems.She has also given Hands-on session on simulation of power converters using KiCAD software (open source)


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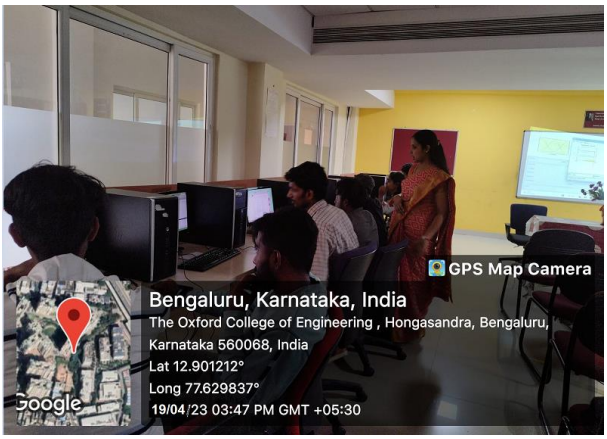
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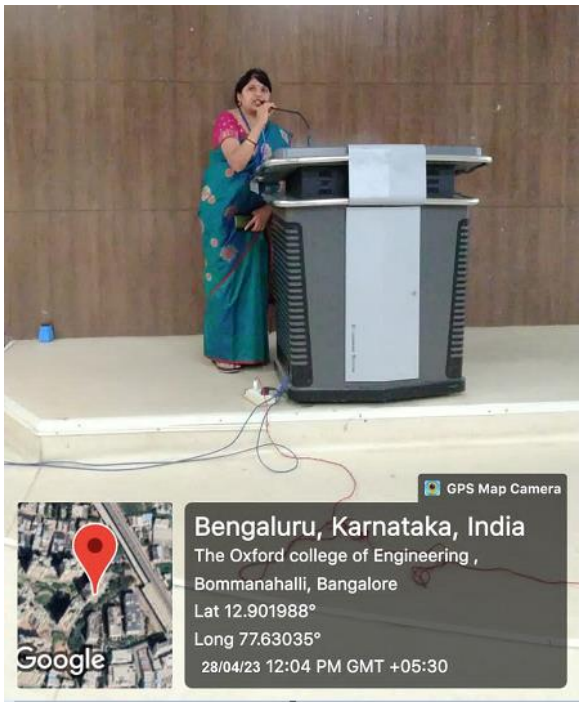
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A technical session on VLSI was handled by Mr Sivaramasubramanian Narayanan, Hardware Technical expert Robert Bosch Engineering and Business Solutions Bangalore. The Topic of

the session was Recent Trends in VLSI technologies an Automotive Perspective. He has explained about the semiconductor crisis due to pandemic and its impact on automotive field.

There was a session on traditional power system and the challenges faced by the traditional grids. Also given a detailed explanation about smart grids, EV charging and grid interaction.The major transmission systems in India and biggest blackouts in the history are also discussed. Discussed about the smart grid conceptual model and realization.

A technical session was handled by Dr. B Pradeep Kumar. ,Assistant Professor,Kakatiya Institute of Technology and Science,Warangal.

The topic was about Introduction to Solar PV system. The speaker has given a very good overview about the solar PV systems and its characteristics. He has explained about the PV parameters and MPPT techniques. Also there was a hands-on session on modelling of PV.

The topic Embedded System Challenges and Electrical Applications in Automotive

was done by Mr Shamin Dudu TS ,General Manager, Power train Emobility, Robert

Bosch Engineering and Business solutions Ltd BangaloreHe has detailed about the present scenario of EVs and he has explained about the Electrical application and challenges in automotive field.

Mr.Bharath ,Manager Sour Urja Vehicle Challenge**.** briefed about the Electric Vehicle dynamics and importance in the present situation. Operating condition of EV, BMS algorithms, Economic aspects, Funding prospective in the Electric Vehicle and all discussed in lucid manner which motivated all the participants to ask more questions during the session as Well as after the session also.

Dr V D Bharath , Professor/HOD, EEE dept ,TOCE has given an overview to Electric Vehicles. Prof N Jayakumar EEE dept ,TOCE detailed about the power converters in Electric vehicles. Ms Srilekha has detailed BMS and issues related to Li-ion batteries.

Dr K Ravi, Professor, Department of Electrical Engineering , VIT University,Vellore Recent Advancements in Electrical Power and Energy System. He has discussed about the microgrids and renewable systems. Dr Y R Manjunatha Professor (Former Chairman) Department of studies in Electrical Engineering ,UVCE, Bangalore talked about Emerging Trends and Applications of Multilevel Inverters in power Electronics.

Dr Vijayakumari , Dean Academics, TOCE Bangalore has given an overview on image processing.She has also mentioned about the recent advancements in the field. Dr Preeta

Sharan, Dean R & D , TOCE Bangalore has explained about recent trends in Photonics. She has detailed about the research opportunities in the field.

The FDP included hands-on sessions also . Mr Uday Bhargav has given the hands on training on various controllers. Hands-on session on simulation of power converters using KiCAD software (open source) was conducted by Dr Prema V. Dr Devi Vighneshwari, Associate Professor , Dept of EEE , has given a session on Hands-on Arduino – Introduction to arduino and its programming in IDE.

FDP was ended with happy learning and concluded with a Valedictory function

Valedictory Event :

On 03.05.2023 at 3.45 P.M , we had a Valedictory session with Our HOD, Co ordinator

and all the faculty membersand participants.

HoD of EEE Dr. V.S . Bharath concluded FDP with his wonderful thank giving note to all the participants , Management , Principal, Directors of TOCE and Organising committee members of this FDP for the smooth conduction of this two week FDP through offline mode.

Prof. Jayakumar , Summarised the 12 days session and delivered a vote of thanks to all.

With this we concluded our FDP.

Feedback from the Participants :

Overall feedback from the participants expressed their happiness and great learning

Throughout the sessions. All the participants were well satisfied with the speakers and their delivery of knowledge sharing.

Outcome

The participants were benefited by advanced and recent knowledge in the Electrical and Electronics engineering which will enhance their professional competence. The areas covered are of great benefit to participants as the topics correspond to the current area of work. Participants learned about the cutting-edge technologies most commonly used in the field

Coordinator	**HOD /EEE**	**Principal**
(Dr.B Devi Vighneshwari)	**Dr.V.S. Bharath**	**Dr N Kannan**
	Professor & Head EEE The Oxford College of Engg Bommanahalli, Hosur Road Bangalore-560 068	PRINCIPAL The Oxford College of Engineering Bommanahalli, Hosur Road Bengaluru-560 068