

# 100.FACULTY DEVELOPMENT PROGRAM ON ENGINEERING EXPLORATION COURSE Master Trainer workshop may 14

## FACULTY DEVELOPMENT PROGRAM ON ENGINEERING EXPLORATION COURSE

Application closes  
on April 20<sup>th</sup>, 2018



### ABOUT THE WORKSHOP

This workshop is aimed at empowering faculty members of engineering institutions in designing student centered freshman engineering course that helps students explore and understand what engineering, engineering problem solving, engineering design process, multi-disciplinary skills, team work and collaboration is. It will be led by a team of experts from KLE Technological University who have been involved in designing such courses and research in engineering education. The workshop follows active, collaborative and experiential learning pedagogies.

At the end of the workshop each team would be able to carry the content, delivery details, resource procurement plan and deployment schedule of Engineering Exploration course for implementation in their respective institution.

The workshop is recognized by IESA – NETRA, the national initiative on ESDM skill development. All the participants will be getting certificate from Electronics Sector Skills Council of India (ESSCI).

**WORKSHOP DATES: MAY 14-18,2018 (MONDAY – FRIDAY)**

### WORKSHOP DETAILS

#### Who can apply?

A team of 03-05 faculty members from AICTE recognized Engineering Institution offering undergraduate degree in engineering. The team shall consist of at least one member each from mechanical, electronics and computer science disciplines.

Apply using the link : <https://goo.gl/forms/OYXqaZ00bjZqQASv1>

#### Registration Fees and Accommodation

Rs. 10,000/- per participant + Taxes. Includes course content, lunch and tea / coffee during sessions.

We encourage on campus stay for participants. Limited accommodation available on campus on twin sharing basis. Rs.2500/- per person for five days. Includes breakfast and dinner.

#### Hosts:

**CENTRE FOR ENGINEERING EDUCATION RESEARCH**



### ABOUT ENGINEERING EXPLORATION COURSE

The first year course – “Engineering Exploration” is an unique innovation born in the educational ecosystem of KLE Tech. This is a co-designed and co-taught course that focuses on problem solving, engineering design, multi-disciplinary skills, data analysis and acquisition, ethics and sustainability. It follows PBL pedagogy and students work in teams to solve identified problems through the entire semester.

This course is recognized by IESA NETRA as a foundation course for its partner institutions.

### CONTACT DETAILS

#### NETRA PARTNER ENGINEERING INSTITUTIONS:

Ms. Swapna Ankola  
Email: [swapna.ankola@gmail.com](mailto:swapna.ankola@gmail.com)

#### OTHER ENGINEERING INSTITUTIONS:

Ms. Preethi Baligar  
Email: [preethi.b@kletech.ac.in](mailto:preethi.b@kletech.ac.in)

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**Master Trainers Workshop on Engineering Exploration Course**  
 Centre for Engineering Education Research, KLE Tech., Hubballi, India

**Title: Faculty development program on Engineering Exploration course**  
**Date: May 14-18, 2018**

Sl.No	Institution Name	Name	Day 01	Day 02	Day 03	Day 04	Day 05
1	CHH. SHAHU COLLEGE OF ENGINEERING , Aurangabad	Vishwaneth Madhavrao Chavan	VC	VC	VC	VC	VC
2	CIHL SHAIU COLLEGE OF ENGINEERING, Aurangabad	Alkshay T Jadhav	Ajadhav	Ajadhav	Ajadhav	Ajadhav	Ajadhav
3	CMR College of Engineering & Technology, Hyderabad	Sowjanya Dundhigal	SD	SD	SD	SD	SD
4	CMR College of Engineering & Technology, Hyderabad	B.Suresh Ram	SR	SR	SR	SR	SR
5	CMR College of Engineering & Technology, Hyderabad	Dasari Ajay	Ajay	Ajay	Ajay	Ajay	Ajay
6	CMR College of Engineering & Technology, Hyderabad	R Venkateswara Reddy	RVR	RVR	RVR	RVR	RVR
7	CMR College of Engineering & Technology, Hyderabad	T Rajesh	TR	TR	TR	TR	TR
8	Doogiri Institute of Engineering and Management studies, Aurangabad	Ganesh I. Dake	G.Dake	G.Dake	G.Dake	G.Dake	G.Dake
9	Doogiri Institute of Engineering and Management studies, Aurangabad	Abhijeet A.Chavan	Abhijeet	Abhijeet	Abhijeet	Abhijeet	Abhijeet
10	Doogiri Institute of Engineering and Management studies, Aurangabad	Chetan D. Sagar	CSagar	CSagar	CSagar	CSagar	CSagar

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Sl.No	Institution Name:	Name:	Day 01	Day 02	Day 03	Day 04	Day 05
11	Deogiri Institute of Engineering and Management studies, Aurangabad	Amitpalsingh J. Punewale	APP	APP	APP	PJP	APP
12	Deogiri Institute of Engineering and Management studies . Aurangabad	Pravin Bhivsen Mahadik	PSM	PSM	PSM	PSM	PSM
13	Deogiri Institute of Engineering and Management studies , Aurangabad	Pankaj Katkar	PK	PK	PK	PK	PK
14	Deogiri Institute of Engineering and Management studies, Aurangabad	Krishna Dachawar	KD	KD	KD	KD	KD
15	Government Engineering College , Aurangabad	D. G. Regulwar	DGR	DGR	DGR	DGR	DGR
16	Government Engineering College , Aurangabad	Pranesh. D. Murnal	PM	PM	PM	PM	PM
17	Government Engineering College , Aurangabad	Kushal. S. Wasankar	KWS	KWS	KWS	KWS	KWS
18	Hyderabad institute of technology and management, Hyderabad	M.Rajeshwar	MR	MR	MR	MR	MR
19	Hyderabad institute of technology and management, Hyderabad	Vinod Kumar Ahuja	VKA	VKA	VKA	VKA	VKA
20	Hyderabad institute of technology and management, Hyderabad	Morrish Kumar	MK	MK	MK	MK	MK
21	Hyderabad institute of technology and management, Hyderabad	R.Uma Maheshwara Singh	URS	URS	URS	URS	URS

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**Title: Faculty development program on Engineering Exploration course**  
**Date: May 14-18, 2018**

Sl.No	Institution Name	Name	Day 01	Day 02	Day 03	Day 04	Day 05
22	Hyderabad institute of technology and management, Hyderabad	Pedda Suresh Ogeti	<i>SO</i>	<i>SO</i>	<i>SO</i>	<i>SO</i>	<i>SO</i>
23	K J Somaiya College of Engineering, Vidyavihar, Mumbai	Arati Phadke	<i>AP</i>	<i>AP</i>	<i>AP</i>	<i>AP</i>	<i>AP</i>
24	K J Somaiya College of Engineering, Vidyavihar, Mumbai	Ramesh Lekurwale	<i>RL</i>	<i>RL</i>	<i>RL</i>	<i>RL</i>	<i>RL</i>
25	K J Somaiya College of Engineering, Vidyavihar, Mumbai	Sagar korde	<i>SK</i>	<i>SK</i>	<i>SK</i>	<i>SK</i>	<i>SK</i>
26	MGM's Jawaharlal Nehru Engineering College, Aurangabad	Sumit D. Kaldate	<i>SK</i>	<i>SK</i>	<i>SK</i>	<i>SK</i>	<i>SK</i>
27	MGM's Jawaharlal Nehru Engineering College, Aurangabad	Gaurav R. Bhalekar	<i>GB</i>	<i>GB</i>	<i>GB</i>	<i>GB</i>	<i>GB</i>
28	MGM's Jawaharlal Nehru Engineering College, Aurangabad	Atul V. Dusane	<i>AD</i>	<i>AD</i>	<i>AD</i>	<i>AD</i>	<i>AD</i>
29	MIT, Aurangabad	Vinud S. Dornullar	<i>VD</i>	<i>VD</i>	<i>VD</i>	<i>VD</i>	<i>VD</i>
30	MIT, Aurangabad	Suhas Chate	<i>SC</i>	<i>SC</i>	<i>SC</i>	<i>SC</i>	<i>SC</i>
31	P.E.S. College of Engineering , Aurangabad	Arvind Uttamrao Jadhav	<i>AJ</i>	<i>AJ</i>	<i>AJ</i>	<i>AJ</i>	<i>AJ</i>
32	P.E.S. College of Engineering, Aurangabad	Niteen T. Kolambikar	<i>NK</i>	<i>NK</i>	<i>NK</i>	<i>NK</i>	<i>NK</i>

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Sl.No	Institution Name:	Name	Day 01	Day 02	Day 03	Day 04	Day 05
33	P.E.S. College of Engineering, Aurangabad	Anil M. Bawiskar	<i>AMB</i>	<i>AMB</i>	<i>AMB</i>	<i>AMB</i>	<i>AMB</i>
34	Rajarambapu Institute of Technology Rajaramnagar, Islampur	Dhananjay. G. Thombare	<i>JGD</i>	<i>JGD</i>	<i>JGD</i>	<i>JGD</i>	<i>JGD</i>
36	Rajarambapu Institute of Technology Rajaramnagar, Islampur	Ajit S. Mali	<i>NMali</i>	<i>NMali</i>	<i>NMali</i>	<i>NMali</i>	<i>NMali</i>
37	Shri Guru Gobind Singhji Institute of Engineering and Technology ,Vishnupuri , Nanded	Uday V. Kulkarni	<i>Uday</i>	<i>Uday</i>	<i>Uday</i>	<i>Uday</i>	<i>Uday</i>
38	Shri Guru Gobind Singhji Institute of Engineering and Technology ,Vishnupuri , Nanded	Anil B. Gonde	<i>ABG</i>	<i>ABG</i>	<i>ABG</i>	<i>ABG</i>	<i>ABG</i>
39	Shri Guru Gobind Singhji Institute of Engineering and Technology ,Vishnupuri , Nanded	Satish T. Hamde	<i>SHamde</i>	<i>SHamde</i>	<i>SHamde</i>	<i>SHamde</i>	<i>SHamde</i>
40	Shri Guru Gobind Singhji Institute of Engineering and Technology ,Vishnupuri , Nanded	Lalit N. Wankhade	<i>LWankhade</i>	<i>LWankhade</i>	<i>LWankhade</i>	<i>LWankhade</i>	<i>LWankhade</i>
41	Shri Guru Gobind Singhji Institute of Engineering and Technology ,Vishnupuri , Nanded	Madhav V. Vaidya	<i>MV</i>	<i>MV</i>	<i>MV</i>	<i>MV</i>	<i>MV</i>
42	Shri Guru Gobind Singhji Institute of Engineering and Technology ,Vishnupuri , Nanded	Arunkumar R. Patil	<i>ARP</i>	<i>ARP</i>	<i>ARP</i>	<i>ARP</i>	<i>ARP</i>

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Sl.No	Institution Name:	Name:	Day 01	Day 02	Day 03	Day 04	Day 05
43	SR Engineering College, Warangal	V S S Jayanth	Jayanth	Jayanth	Jayanth	Jayanth	Jayanth
44	SR Engineering College, Warangal	Balasubramanian N	Bala	Bala	Bala	Bala	Bala
45	SR Engineering College, Warangal	D Ramesh	DR	DR	DR	DR	DR
46	SR Engineering College, Warangal	A Rajeshwar Rao	AR	AR	AR	AR	AR
47	SR Engineering College, Warangal	Ch Rajendra Prasad	Rajendra	Rajendra	Rajendra	Rajendra	Rajendra
48	SR Engineering College, Warangal	Santhosh Kumar	Skumar	Skumar	Skumar	Skumar	Skumar
49	SR Engineering College, Warangal	Alok Govil	Alok G	Alok G	Alok G	Alok G	Alok G

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Sl.No	Institution Name:	Name:
50	Vignan's Institute of Information Technology, Visakhapatnam	Ch Sekhar
51	Vignan's Institute of Information Technology, Visakhapatnam	Nagarjuna Karyemsetty
52	Vignan's Institute of Information Technology, Visakhapatnam	K Srinivas
53	Vignan's Institute of Information Technology, Visakhapatnam	M Hemanta Kumar
54	Vignan's Institute of Information Technology, Visakhapatnam	P.V.Umnikrishnan
55	Vignan's Institute of Information Technology, Visakhapatnam	R Hanumantha Rao
56	Vignan's Institute of Information Technology, Visakhapatnam	B VENKATESH
57	Rajarambapu Institute of Technology Kajaramnagar, Islampur	Rajani Kant A Meti
58	KLE Technological University, Hubballi	Sowmya S Patil
59	KLE Technological University, Hubballi	Rajeswari M
60	KLE Technological University, Hubballi	Prasant Narayanankar

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Sl.No	Institution Name:	Name:	Day1	Day2	Day3	Day4	Day5
61	KLE Technological University, Hubballi	Bhagya Sunag	<i>BS</i>	<i>BS</i>	<i>BS</i>	<i>BS</i>	<i>BS</i>
62	KLE Technological University, Hubballi	Doddabasappa Marebail	<i>DM</i>	<i>DM</i>	<i>DM</i>	<i>DM</i>	<i>DM</i>
63	KLE Technological University, Hubballi	Suchma V	<i>SV</i>	<i>SV</i>	<i>SV</i>	<i>SV</i>	<i>SV</i>
64	KLE Technological University, Hubballi	B Surendra Reddy	<i>BR</i>	<i>BR</i>	<i>BR</i>	<i>BR</i>	<i>BR</i>



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**SCHEDULE for Master Trainers Workshop on Engineering Exploration Course**  
Centre for Engineering Education Research, KLE Tech., Hubballi, India

		14-05-2018	15-05-2018	16-05-2018	17-05-2018	18-05-2018
Time		Day 1	Day 2	Day 3	Day 4	Day 5
9.00 am to 9.30 am	Session 1	Inaguration and Context setting	Reflection of Day 1	Reflection of Day 2	Reflection of Day 3	Reflection of Day 4
9.30 am to 10.30 am	Session 2	Introduction to Engineering Exploration course	Essentials of module design	Student Engagement and Multidisciplinary learning	Introduction to project based learning	Course project presentations
10.30 am to 11.00 am	Tea/ Discussions					
11.00 am to 12.30 pm	Session 3	Elements of course design and student-centred learning	An application of case-based pedagogy	Student Engagement and Multidisciplinary learning	Project based learning - A case in Engineering Exploration	Creating an ecosystem for engineering exploration
12.30 pm to 1.30 pm	Lunch					
1.30 pm to 3.00 pm	Session 4	Essentials of module design	Participants presentations I	Participants presentations III	PDCA for course projects	Assessments of student learning and course
3.00 pm to 3.30 pm	Tea/ Discussions					
3.30 pm to 5.00 pm	Session 5	Essentials for module design.	Participants presentations II	Participants presentations IV	Enhancing prototyping skills for course project	Valedictory and Feedback
5.00 pm to 5.30 pm	Wrap-up					
7.00 pm	Dinner					

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*Centre for Engineering Education Research,  
KLE Tech., Hubballi, India*

## **Master Trainers Workshop on Engineering Exploration-2**

India Electronics and Semiconductors association is promoting Electronics System Design and Manufacturing and entrepreneurship in India through select educational institutes and universities in India. This is being pursued through NETRA (National ESDM Training and Research Academy) which has been created for this aforementioned purpose.

As a part of this program, MoU has been signed between IESA-NETRA and CEER, KLE Tech to take Engineering Exploration to develop ESDM skills in select universities / engineering colleges in India. This collaboration covers:-

1. Sharing of curriculum content with select institutes
2. Empowering faculty members through workshops
3. Mentoring to create a required learning environment in these institutes
4. Periodic review and impact assessment

This collaboration signed during September 2017 is for a three-year period. Master Trainers Workshop on Engineering Exploration was conducted during 2018 the details of which are shown in table below.

The workshop was conducted by the lead designers of the course Engineering Exploration:

- Dr. Gopalkrishna Joshi, Director, Centre for Engineering Education Research, KLE Tech.
- Ms. Preethi Baligar, Assistant Professor, Centre for Engineering Education Research, KLE Tech.
- Mr. Sanjeev Kavale, Assistant Professor, School of Mechanical Engineering, KLE Tech.
- Mr. Kaushik M, Assistant Professor, School of Electronics and Communication Engineering, KLE Tech.

The objectives of the workshop was to

1. Frame the course structure, assessment and evaluation plans
2. Interpret the context of each module in the engineering profession
3. Identify the concepts related to the module
4. Design content and activities related to the each of the identified concepts
5. Identify resources for activities
6. Develop worksheet/s to structure student learning
7. Formulate rubrics for assessment of activity/ies

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As of date, a number of institutes in India have started Engineering Exploration course.

Table Master Trainers workshop for Engineering Exploration conducted during 2017-2018

FDP	Institutes	Number of participants	Date
Second	13	64	May 14-18, 2018

The participants were from the following institutes:

1. CHH. SHAHU COLLEGE OF ENGINEERING , Aurangabad
2. CMR College of Engineering & Technology, Hyderabad
3. Deogiri Institute of Engineering and Management studies, Aurangabad
4. Government Engineering College , Aurangabad
5. Hyderabad institute of technology and management, Hyderabad
6. K J Somaiya College of Engineering, Vidyavihar, Mumbai
7. MGM's Jawaharlal Nehru Engineering College, Aurangabad
8. MIT, Aurangabad
9. P.E.S. College of Engineering , Aurangabad
10. Rajarambapu Institute of Technology Rajaramnagar, Islampur
11. Shri Guru Gobind Singhji Institute of Engineering and Technology ,Vishnupuri, Nanded
12. SR Engineering College, Warangal
13. Vignan's Institute of Information Technology, Visakhapatnam

### Glimpses of faculty in action

