

ACTIVITIES OF TEACHING-LEARNING CENTER (2020-2021)

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(i) **Name of the Institute** : Kalasalingam Academy of Research and Education,
Krishnan oil, Tamilnadu, India

(ii) **Name and Status of the Teaching-Learning Center:**

Centre for Learning Technology.
It is an Independent Centre

(iii) **Date (or year) of Establishment:** 2015

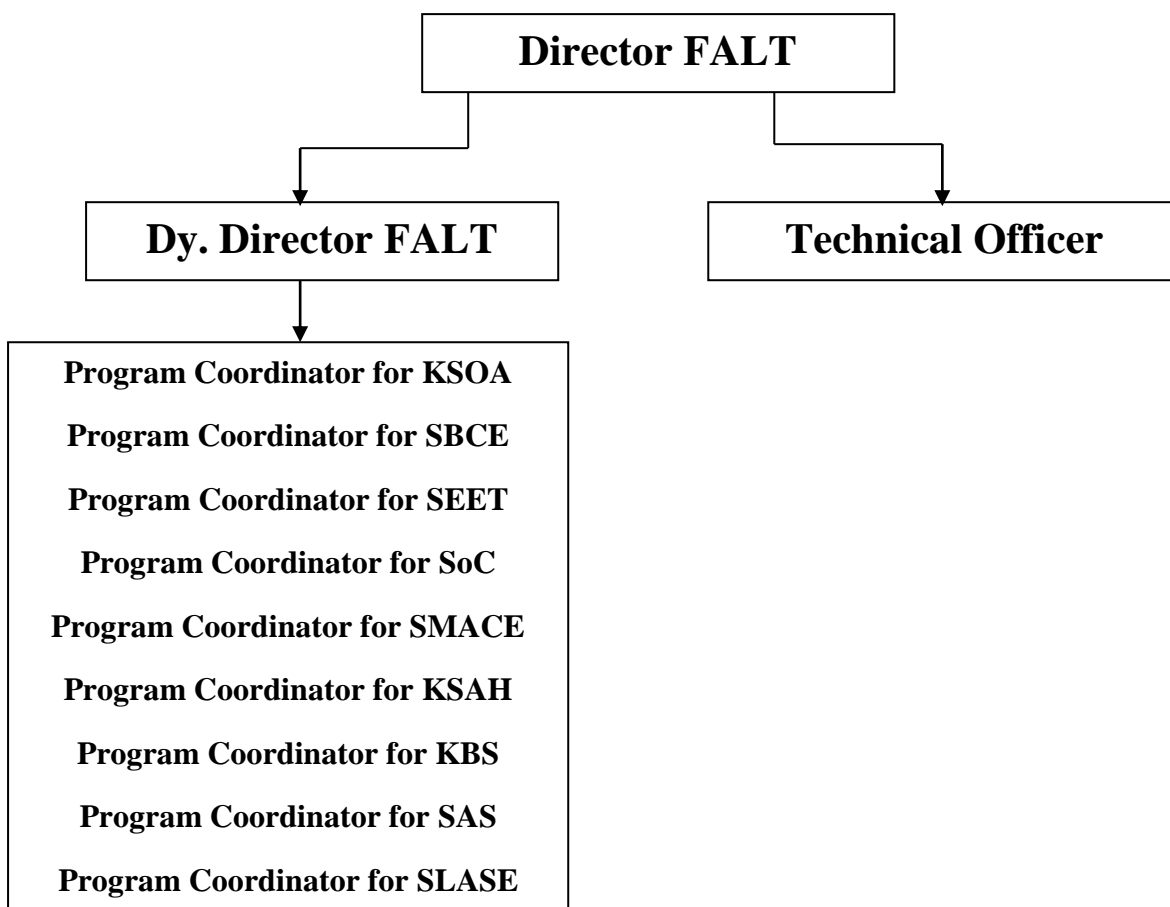
iv) **Mission Statement and Mandate of the Center:**

- a) To train faculty members in digital pedagogy and use of ICT
- b) To equip faculty members in niche technology
- c) To devise innovative evaluation methods to meet the spirit of OBE.

Mandate of the Center:

- a) To organize two workshops every year for skill up gradation of faculty members is use of ICT.
- b) To perform TNA and organize FDPs/FTPs to promote continued development of technical competence of faculty members in niche areas.
- c) To collaborate with industries and national level training institutes/organizations on technology for teaching.
- d) To support faculty members to participate in off campus programs
- e) To facilitate student training in the niche areas.


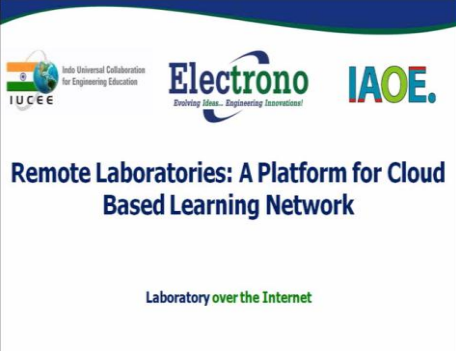
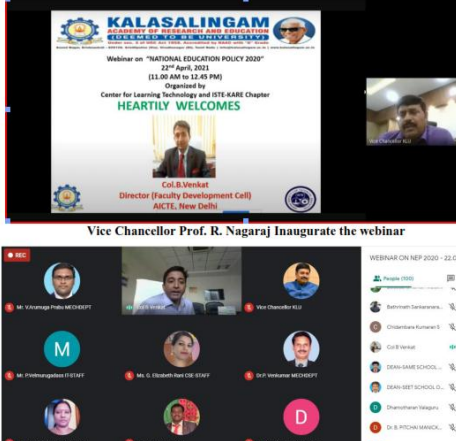
v) **Organizational Structure of the center: (Director/ Incharge, Coordinator, other office bearers, etc):**

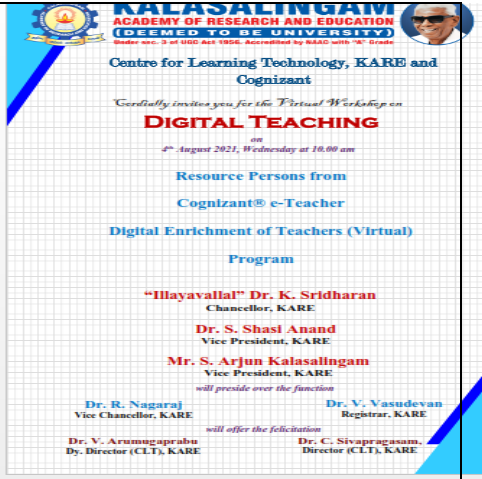


vi) **Training and Development Activities conducted in 2020-2021:**

The following FDPs, Conclaves and Workshops etc. was conducted in the academic year 2020 – 21 and the details are given below:

S. No	Name of the Activity Conducted	Type of Activity (Workshop/FDP /Conclave/Training/ Webinar)	Date and Duration of the Activity	Brochure / Circular / Photo
1.	Online Faculty Training on Project Proposal Writing	Training	25.05.2020 & 26.05.2020 (2-5pm)	

2	One Week Faculty Development Program on “Digital Tools for Teaching”	FDP	15.06.2020 to 20.06.2020	
3	Creating Virtual Lab- An Introduction (with the support of IUCEE)	Webinar	18.05.2020	
4	One Week Faculty Development Program on “Engineering Education”	FDP	19.01.2021 to 23.01.2021	<p>Effective Teaching Workshop Day 1</p> <p>Participants should bring a laptop and one passport sized photo and the syllabus for a course that you have taught at least twice, or your current syllabus or your syllabus for next semester</p> <p>Participants should bring a laptop and the syllabus for a course that you have taught at least twice, or your current syllabus or your syllabus for next semester, please also bring a passport-sized photo (photocopy is sufficient)</p> <p>9:30 am Introductions 9:45 Introduction to the Workshop Activities: think-pair-share; prepare introduction card with photo 10:15 am Expert vs. Novice learners Activities: Participants-develop-questions related to what we just learned 11:00 am Tea Break 11:15am Learning styles; how to teach to different learning styles Activity: Think-pair-share 12:00 pm Outcomes based-education intro Activity: Review of course learning outcomes, revision, review of class outcomes 1:00 pm Lunch 2:00 pm Harnessing Technology for the Classroom; introduction to CANVAS 3:00 pm Tea break 3:15pm Hands on session – Creating a course website with Canvas Activity: create a quiz, upload files, link course outcomes to quiz through managing rubrics, embed video HOMEWORK for tomorrow: https://www.youtube.com/watch?v=1J1URBdisYE 4:10 pm Minute paper 4:15 pm adjourn</p>
5	Webinar “National Educational Policy 2021”	Webinar	22.04.2021	

6	Virtual Workshop on “Digital Teaching” by Centre for Learning Technology, KARE and Cognizant	Workshop	4. 08.2021	
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Leadership Training program was conducted at different levels by utilizing the recorded webinar of IUCEE. The different levels of the program is listed below:

1. Lab In charge
2. Program Coordinator
3. Project Coordinator
4. Head of the Department

The following program was conducted for the **Lab In charge** and the resource person details are given below:

S. No	Title of Programme	Resource Person(s)	Date
1.	Improving laboratory experience in Engineering education	Dr. Surendra Singh Rathod and Dr. D.R. Kalbande, Sardar Patel Institute of Technology	26.06.2020
2.	Nurturing Research Aptitude in UG students through Curriculum Laboratory	Dr. C.Sivapragasam, Director (IQAC), KARE	28.06.2020
3.	Designing an Engineering Laboratory Course for Problem Based Learning	Luppe Maximilian and Vilma A.Oliveira, Universidade de Silo Paulo, USP	29.06.2020
4	Tutoring Junior Undergraduate Students by Seniors in Engineering Courses	Uma Boregowda, Mained College of Engineering	29.06.2020
5	The effectiveness of Virtual Labs in engineering education What do we measure?	Anita S Diwakar and Santosh B. Noronha, IITB	30.06.2020

The following program was conducted for the **Program Coordinator** and the resource person details are given below:

S. No	Title of Programme	Resource Person(s)	Date
1.	Enhancing Interdisciplinary Research in Engineering Education	Dr. Thanikachalam Vedhathiri, National Institute of Technical Teachers Training and Research	27.06.2020

		Chennai, India	
2.	Making Engineering Appealing to the Next Generation	Dr. Norman L.Fortenberry, ASEE, USA	27.06.2020
3.	Innovating final year capstone projects in engineering education	Dr. Pradeep Waychal, Guruji Educational Foundation	28.06.2020
4	Practicing Peer Assessment An Approach to develop 21st century skills	Dr. Siddharth Jadeja, BHA College of Engineering and Technology	28.06.2020
5	Engineering Curriculum for Millennials	Dr. Shivasankar R Srivastara and Prof CC Arjun, BMS College of Engineering	28.06.2020

The following program was conducted for **the Project Coordinator** and the resource person details are given below:

S. No	Title of Programme	Resource Person(s)	Date
1.	Project Based Learning Engaging Students in Authentic Work;	Dr.Rick Vaz, Worcester Polytechnic Institute	26.06.2020
2.	Assessment Tools for Higher order Learning A Case Study	Dr.P.Jayarekha and Dr. Shanmbhavi B.R, BMS College of Engineering	26.06.2020
3.	Student driven design and experimentation	Dr.Joseph Menicucci; Montana State University	27.06.2020
4	The Challenge of Assessing Teamwork and Group Projects	Dr. Alaa K.Ashmawy, Dean of the School of Engineering, American University of Dubai (AUD)	27.06.2020
5	Developing Project Management Skills to enable Engg Faculty to handle Multidisciplinary Projects	Jyoti Bali and Arunkumar Giriapur, BVB College of Engineering and Technology	30.06.2020

The following program was conducted for the **Head of the Department** and the resource person details are given below:

S. No	Title of Programme	Resource Person(s)	Date
1	Preparing Engineers to Address Grand Challenges	Dr. B. Ramakrishna, National Academy of Engineering, Washington	26.06.2020
2	Research methodology - methodologies for scientific research	Mr. Chandra Shekhar Singh, Dronacharya College of Engineering	29.06.2020
3	Promoting Peer Assisted learning and Developing leaders	Jyoti Bali and Arun kumar Giriapur, KLE Technological University	29.06.2020
4	The CoRe Experience An Integrated Academic and CoCurricular First	Dr. Neeraj Buch College of Engineering, Michigan State University, USA	30.06.2020
5	Performance Management and Turnaround Mechanism of Poorly Performing Institutes	Dr. Thanikachalam Vedhathiri, National Institute of Technical Teachers Training and Research Chennai, India	30.06.2020

vii) Academic Support Activities conducted in 2020-2021 (for students and faculty during COVID pandemic phase)

We conducted many activities to support our faculty and students during the pandemic, which are listed as below:

Faculty Activities:

S. No	Name of the Activity Conducted	Type of Activity (Workshop/FDP /Conclave/Training/ Webinar)	Date and Duration of the Activity
1	Online Training for the students (Freshmen Induction Program)	Training	15.09.2020
2	Motivating students for Online Learning	Webinar	2.11.2020
3	Webinar on Creating Virtual Lab – An introduction with the support of IUCEE)	Webinar	18.05.2020
4	Virtual workshop on digital Teaching	Workshop	04.08.2021
5	Effectiveness of the Foundation core courses for the first UG and Arts and Science Programs	Faculty Conclave	05.01.2021

Student Activities:

S. No	Name of the Activity Conducted	Type of Activity (Workshop/FDP /Conclave/Training/ Webinar)	Date and Duration of the Activity
1	IUCEE Student Competition - Oxygen Enriched Air from Plants	Student Project Competition by IUCEE	10-06-2021 to 10-07-2021
2	NEWS Reporting	Technical & INTER	15-07-2021 to 31-07-2021
3	Covid Talks	Non-Technical & INTRA	26-07-2021 to 02-08-2021
4	Project Planning & Strategy	Webinar	27-07-2021
5	IUCEE Student projects oriented for problem based learning (POPEL-2021)	PBL Activity by IUCEE	26-08-2021 to 15-11-2021
6	IUCEE Student Summit 2021	Yearly Summit by IUCEE	03-09-2021 to 05-09-2021
7	Art From Waste	Non-Technical & INTER	10-09-2021 to 29-09-2021
8	IUCEE Sustainability Course 2021	Introductory Course on Sustainability by IUCEE	23-10-2021 to 18-12-2021
9	Word of the Day	Campaign	Runs Everyday
10	Word of the Day (Quiz)	Quarterly Quiz Competition	11-11-2021
11	Chap Talks	Campaign (Student Presentations)	Runs once a week, Saturday

viii) Any Other Information about the Teaching Learning Practices undertaken for effective learning in the institution during 2020-21:

The Centre for Learning Technology coordinated the organization of department level Faculty Development Program and the details are given below:

a) FDPs organized Department wise:

S.No	Department	Name of FDP	Date
1	Aeronautical	Computational fluid dynamics	17/05/2020-23/05/2020
2	Biomedical	Medical Image Processing	19/05/2020 –25/05/2020
3		Emerging Trends in Biomedical Engineering	10/06/2020 to 10/06/2020
4	Biotechnology	Gearing up Research and Research Writing	20/05/2020 – 26/05/2020
5	Biotech & Chemical	Biochemical Engineering: Basics and Beyond	01/07/2020-01/07/2020
6	CSE	IT physical security and system security	11/06/2020-15/06/2020
7		Project Based Java Programming from An Industrial Perspective	19/05/2020-21/05/2020
8		Predictive Analytics	05/06/2020-11/06/2020
9		Sensor Technology and Instrumentation	16/06/2020-19/06/2020
10	ECE	Recent Trends in Wireless and IoT-enabled Networks	19/05/2020-25/05/2020
11		Let's Play Machine Learning with Tensor Flow 2.x	25/06/2020-01/07/2020
12	EEE	Power Electronic Converters for Renewable Energy Systems	27/05/2020-02/06/2020
13	Food Technology	Designing of Food Processing Equipment & Fabrication	23/05/20 – 29/05/20
14		Advances in Food Processing Technologies	22/06/2020 – 28/06/2020
15	IT	Cyber Forensics	18/04/2020 -26/04/2020
16		Recent trends in Information Technology	18/04/2020 -24/04/2020
17	Mechanical	Applied Thermal Engineering	
18		FDP on Advances in Production and Industrial Engineering	25.05.2020 to 30.05.2020
19		Recent Trends in Manufacturing	18.05.2020 to 22.05.2020
20	MBA	Management Development Program me	20.5.2020, 22.05.2020 & 24.05.2020
21		Effective Learning and Teaching Methods of Business Practices	19.05.2020 to 25.05.2020
22		Emerging trends in business and society	26.06.2020–02.07.2020
23	MCA	Microsoft Azure for Beginners	12.05.2020 - 14.05.2020
24		Virtualization	17.06.2020 - 24.06.2020
25	Chemistry	Innovations in Teaching Methodologies	21-05-2020 - 27-05-2020
26		Recent Advances and Research Avenues in Material Science (RRM-2020)"	08-06-2020 - 14-06-2020
27	Mathematics	Probability and Statistics (With hands on training using virtual MATLAB and R)	16.05.2020-22.05.2020
28		Novelty in Trending Engineering Mathematics – 2020	06.06.2020-1205.2020
29	Physics	Advanced Engineering Materials	21.05.2020– 27.05.2020
30	CS & IT	User Experience Design and User Interaction Design	25.05.2020 - 31.05.2020

b) IUCEE- MRC:

With the help of Dr. Prathiba Nagabhuan, the IUCEE MRC for KARE, we have organized a webinar for our faculty members on "Motivating Students towards Online Learning" on 02.11.2020 More than 100 of our faculty members participated in that and almost all of them implemented it in their teaching learning. A sample feedback report is enclosed herewith.

Name of the faculty: Dr.T.Arun Prasath	Course Code/Name: EEE18R171/Basic Electrical and Electronics Engineering
Name of the Department: Biomedical	Year/Semester: I / I

S.No	Questions	Responses
1	What is the motivation level of your students to attend your online classes before attending this webinar? Please rate between 0 to 5 (0 - V. Poor and 5 - V. Good)	4 – Good, In practical session students are not giving their response and they are not completed their experiment within the time allotted for practical. As per the discussion in the webinar, I have given the detailed instructions of lab experiment before the commencement time. During the lab hours the students have done the experiments in the given time and uploaded into the Google classroom.
2	How did you assess the motivation level of your students?	By interacting and asking question during the class hours, the interest of student explore in terms of asking the doubts, involving very actively in practical session.
3	Of the different models discussed in the webinar, which model do you prefer to adopt? Why?	TEC-VARIETY model, it is easy to undergo, it also emphasizes Encouragement, interactivity, involvement, effort, capturing the knowledge and yielding good results.
4	What is the motivation level of your students to attend your online classes after you implemented the model?	5 - Very good, the feedback and responses from the student's side is very good. Most of them showed interest in doing the projects.
5	List some challenges or difficulties that you faced in implementing?	During the poor network connection, some of the students are facing lot of problems during class for accessing the content which is delivered. It takes more time to explain the concept for understanding all.
6	Please give one student case study about his/her improvement. The case study should be hand written by students	9920004238 PENDYALA SRIRAM CHOWDARY I am given case study to him in the topic of Automatic control of street light and solar related model. Case study implementation: Solar cooker



Case study implementation: Street light control.



P. Sriram chowdary (9920004238) of B.Tech CSE ; sir has assigned a case study of Automatic control of street light and solar related rice cooker. Also I got output successfully. Though I am from CSE Computer science engineering it is easy and it's very interesting. Because of my faculty I understood it well and I got confidence on me and my subject. I hope I will do a lot of project like this in my future. Thankyou sir.

c) IUCEE Activities:

Our faculty members regularly participate in the IUCEE cluster meeting on TLC every month. The deliberations are taken to higher authorities for their consideration.

d) Innovative Initiatives

The following innovative initiatives are planned and is in the process of experimental implementation

1. Flexibility in Assessment System to meet OBE requirement

Faculty members are given the option to adopt various assessment techniques such as assessment based on course level mini project, design/development of a prototype, seminars, evaluation by industry personnel, peer evaluation, field visits, quizzes, open book tests etc.

2. Students participation in implementing OBE

An innovative initiative is in progress wherein students do self appraisal in the OBE parameters, based on which mechanisms are devised to achieve the OBE goal.