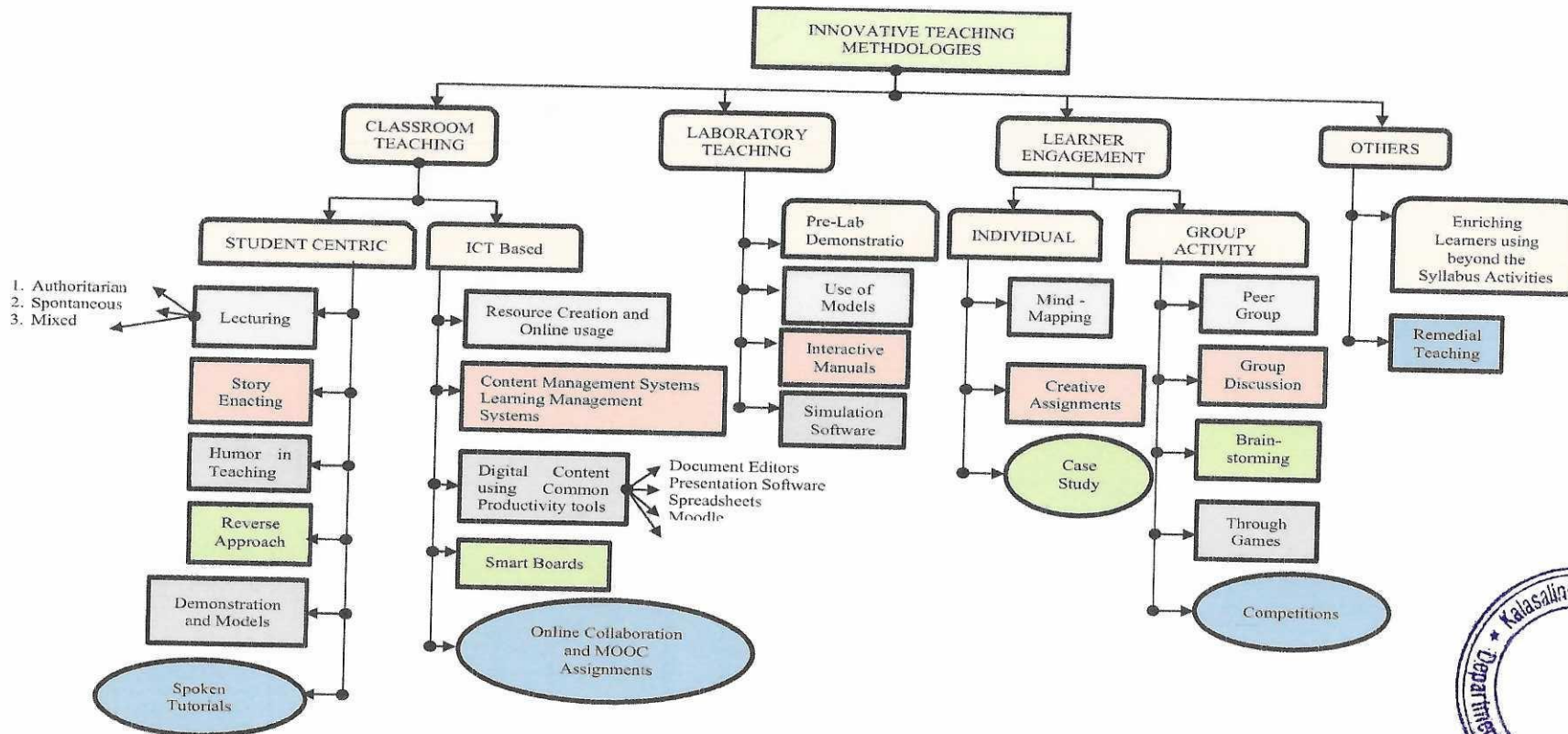


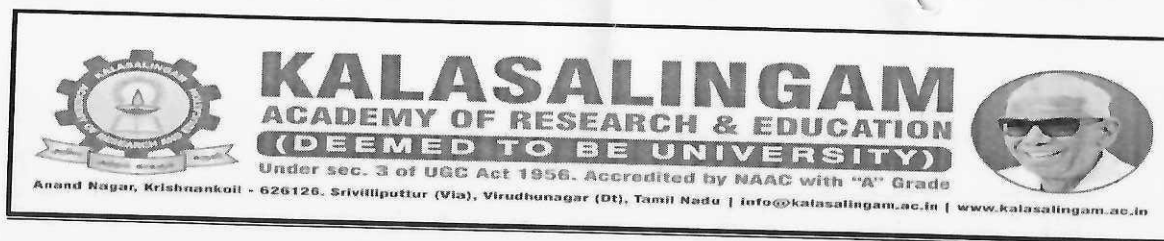
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Department of Electronics and Communication Engineering

Criteria 5 – Faculty Information and Contribution (200)

5.6 Innovations by the Faculty in Teaching and Learning





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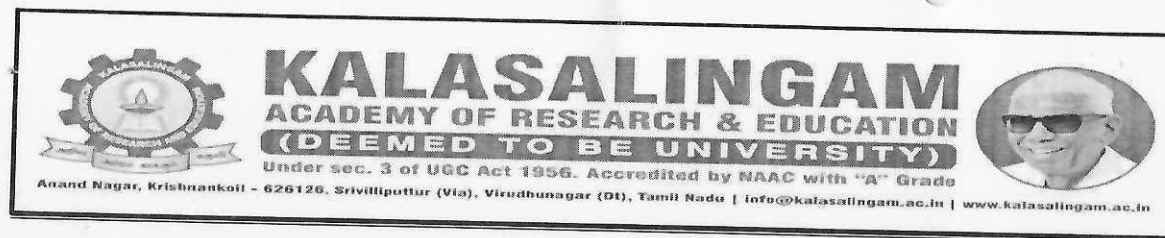
Department of Electronics and Communication Engineering

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5.6 Innovations by the Faculty in Teaching and Learning

S.No	Name of the Faculty	Course Code	Course Name	Innovative Pedagogy Adopted	Impact on Students
1	DR. V. HIMA DEEPTHI	ECE18R273	DSP	MATLAB Grader	<ol style="list-style-type: none"> 1. Students learning rate is assessed based on viva questions during the lab sessions 2. Observed improvement in the programming knowledge
		ECE18R273	DSP	Mini Project	<ol style="list-style-type: none"> 1. Project based learning allows students to form groups and were allowed to discuss about the given application 2. It allows the students to clarify their doubts by discussing among themselves 3. Able to apply the digital signal processing concepts in real time applications 4. Slow learners also involved actively during the project presentation





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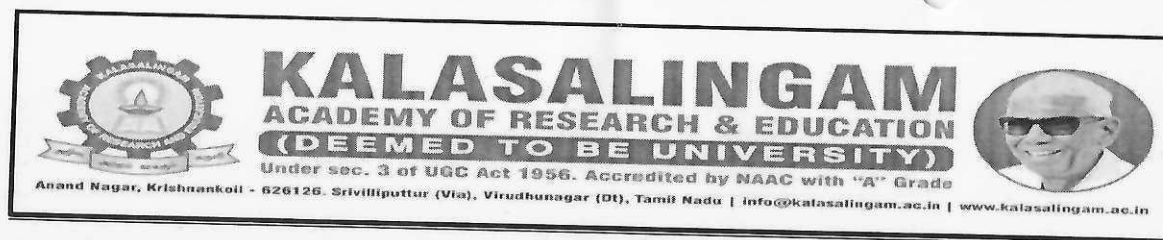
Department of Electronics and Communication Engineering

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S.No	Name of the Faculty	Course Code	Course Name	Innovative Pedagogy Adopted	Impact on Students
2	DR. A. MUTHUKUMAR	ECE18R273	DSP	MATLAB Onramp	<ol style="list-style-type: none"> MATLAB ONRAMP- Fundamentals is a course provides a comprehensive introduction to the MATLAB technical computing environment. No prior programming experience or knowledge of MATLAB is assumed. Themes of data analysis, visualization, modeling, and programming are explored throughout the course Topics Include: <ol style="list-style-type: none"> Working with the MATLAB user interface Entering commands and creating variables Analyzing vectors and matrices Visualizing vector and matrix data Working with data files Working with data types Automating commands with scripts





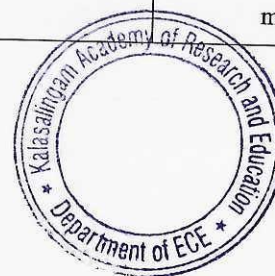
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					8. Writing programs with branching and loops 9. Writing functions
3	DR. B. PERUMAL		CSP	Field Visit	1. Field visit to identify the real-life problems of the society in the course community service project. 2. Students get exposure to the real-life problems and develops the solution to the problems 3. The outcome was seen in terms of publication, conference, patent and product
4	DR. J. CHARLES PRAVIN	ECE18R203	AIC	Participative Learning	1. Students have learned e-sim software from spoken tutorial 2. Students are participating in the event mixed signal soc design marathon using e-sim by IIT Bombay





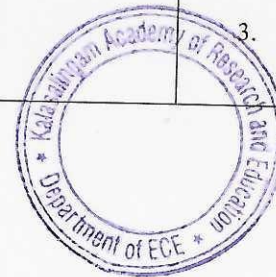
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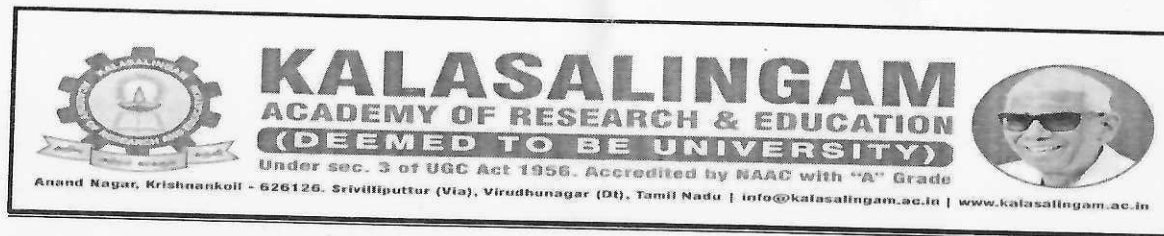
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5	DR. M. KALPANA	ECE18R275	Analog and Digital Communication	Blended Learning - Flipped Video in Airtract	<ol style="list-style-type: none"> 1. Flipped Video helps students with basic prior knowledge to comprehend the concepts taught in the live classroom. 2. Students will get effective and efficient learning through Blended learning. 3. Blended learning combines face-to-face learning with online learning.
		ECE18R260	Internet of Things	Blended Learning - Flipped Video in Airtract	<ol style="list-style-type: none"> 1. Flipped Video helps students with basic prior knowledge to comprehend the concepts taught in the live classroom. 2. Students will get effective and efficient learning through Blended learning. Blended learning combines face-to-face learning with online learning. 3. Encouraged the students to publish the papers in Scopus by using IoT Concept.





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6	DR. SHASHI KANT DARGAR	ECE18R372	Antenna and Propagation	Prototype Demonstration	<ol style="list-style-type: none"> 1. Students learning is based on the structure simulation and physical model verification that lead to a better understand the radiation pattern due to antenna structure change. 2. It has brought their attention to deeper understanding which was halfway due to ONLY simulation study. In fact it was experienced that simulation results were better analysed by them after physical demo spread among them through their teacher's YouTube video. 3. It has been experienced that model and simultaneous model design has resulted in better understanding of subject matter as observed in lab viva and also helped teachers to deliver the physical laboratory exercise during the COVID-spread-online period of study.





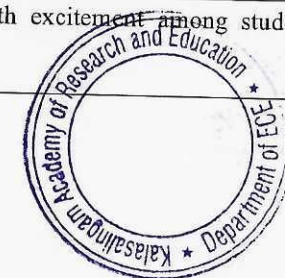
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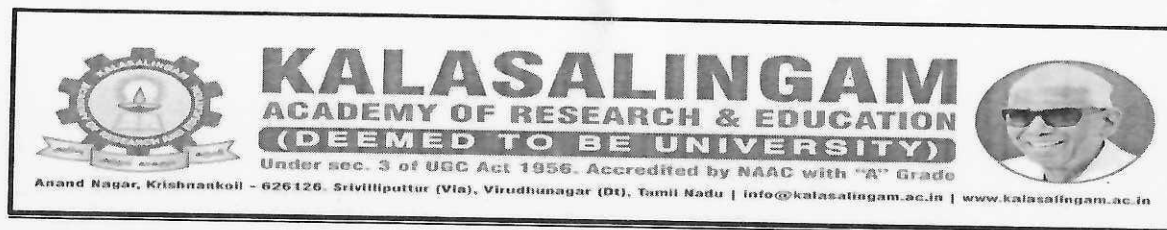
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					4. During those period work done by few such learner was presented and published in international conference and the outcome was included in the proceedings as a full article.
7	DR. K. S. DHANALAKSHMI	213ECE2315	STATISTICAL INFERENCE AND MACHINE LEARNING	Activity based Learning	<ul style="list-style-type: none"> • Role playing can be effectively used in the classroom • Motivate and engage students • Enhance current teaching strategies • Provide real-world scenarios to help students learn • Learn skills used in real-world situations (negotiation, debate, teamwork, cooperation, persuasion) • Provide opportunities for critical observation of peers
8	DR. S. DIWAKARAN	18REEE102	Basic EEE	Team Assignment	<ul style="list-style-type: none"> • As a freshman, he/she will be involved in a team to discuss, share his/her ideas lead to creativity work
9	DR. JOSEPHINE SELLE JEYANATHAN	i. ECE18R317 Biomedical Electronics		Kahoot for conducting quiz	1. Motivation of learning with excitement among students is enhanced





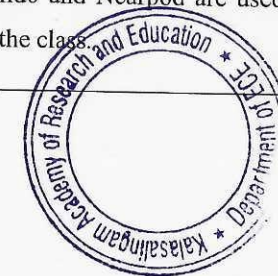
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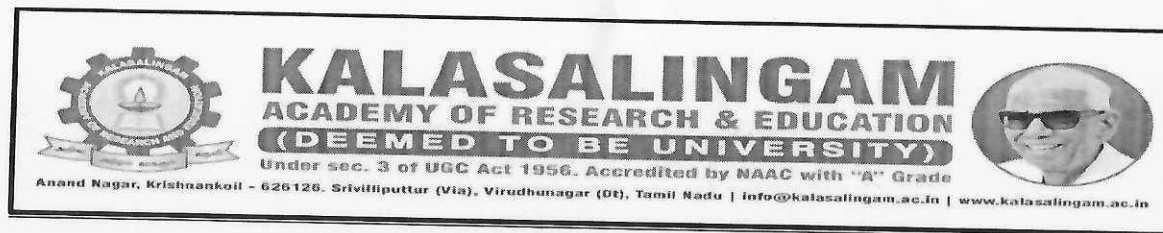
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		ii. HSS002 Engineering Management			2. Instant revealing of marks in the leader board encourages students to do better. 3. Motivates the students to learn from their incorrect answers.
		iii. Neural Networks			
		iv. HSS006 Professional Ethics			
		v. ECE205 Electronic Circuits			
		i. ECE18R274 Electromagnetic Waves and Transmission Lines		Quizziz for conducting quiz	1. Quizziz platform used to summarize the lecture taught in the class. 2. Students' level of understanding is analysed through the analysis report question-wise. 3. Develops student-teacher interaction through virtual mode. 4. Bridges the online mode gap even during the lockdown period.
		ii. ECE18R275 Analog and Digital Communication			
		iii. ECE18R251 Data Structures			
		iv. ECE18R370 Python for Design and Verification Engineers			
		ECE18R274 and ECE18R301	Electromagnetic Waves and Transmission	Interactive learning through peardeck, slido and nearpod	1. Google slides ad-ons such as slido and Nearpod are used to summarize the lecture taught in the class.





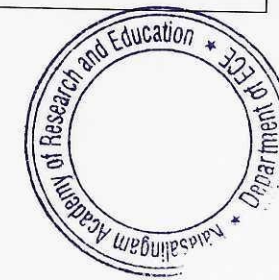
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			Lines and Control System Engineering		<ol style="list-style-type: none"> Students' level of understanding is analysed through the analysis report question-wise. Develops student-teacher interaction through virtual mode. Bridges the online mode gap even during the lockdown period.
10	DR. V. MUNESWARAN	ECE18R274	Electromagnetic Waves and Transmission Lines	Animation	<ol style="list-style-type: none"> Collaborative learning develops students higher level thinking ability, oral communication, self-management and leadership skills. Promotion of student faculty interaction. Increase in student retention, self-esteem, and responsibility.
		ECE18R274	Electromagnetic Waves and Transmission Lines	SLIDO	<ol style="list-style-type: none"> Slido platform used to summarize the level of understanding through the analyiss report question-wise. Develops student-teacher interaction through virtual mode. Bridges the online mode gap even during the lockdown period.





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11	Dr. B. VEERASAMY	ECE18R374	Embedded System for IoT	Collaborative Learning	<ol style="list-style-type: none"> 1. Collaborative learning develops students higher level thinking ability, oral communication, self-management and leadership skills. 2. Promotion of student faculty interaction. 3. Increase in student retention, self-esteem, and responsibility.
12	DR. K. PANDIARAJ	ECE18R272	Digital Circuits and Systems Design	MOOC Course, Virtual Lab	<ol style="list-style-type: none"> 1. MOOC Course Can be used as a tool in a blended learning program, where students can access more information than what is provided in the class. 2. Virtual Laboratory can help students understand the higher levels of cognitive analysis, synthesis, and evaluation. Based on the descriptions that have been put forward can be concluded that the use of virtual laboratory is very suitable for learning cause it can help students improve their conceptual understanding.





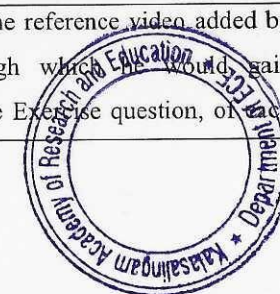
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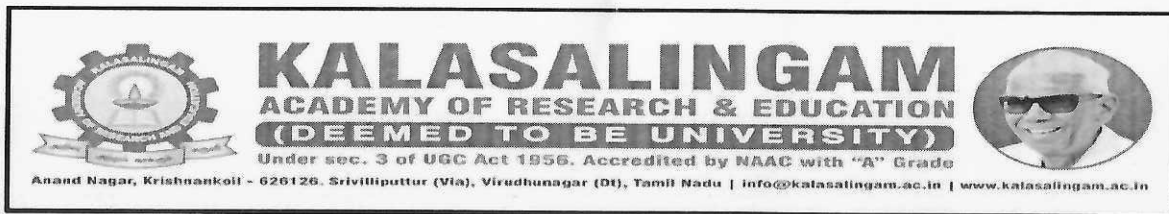
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		ECE18R272	Digital Circuits and Systems Design	Minute Paper	1. Minute papers can provide a “conceptual bridge” between successive class periods. For instance, at the beginning of class, a quick review of student responses to a minute paper answered at the end of a previous class can provide an effective segue between successive class sessions.
13	MR. P. MANIKANDAN		Numerical Analysis Using MATLAB	MATLAB GUI App	
		ECE18R203	Analog Integrated Circuits	Labsland Virtual Lab	1. Labsland Virtual Lab helped the students to apply their understanding on Linear Integrated circuit design. 2. Also it helped the students to improve their Conceptual and Design skills
14	MR. JENYFAL SAMPSON	211ECE1400	IoT - Sensors and Devices	Flipped Class through Youtube Channel	1. Students will be going through the reference video added by the Course Coordinator, through which they would gain knowledge on how to answer the Exercise question, of which





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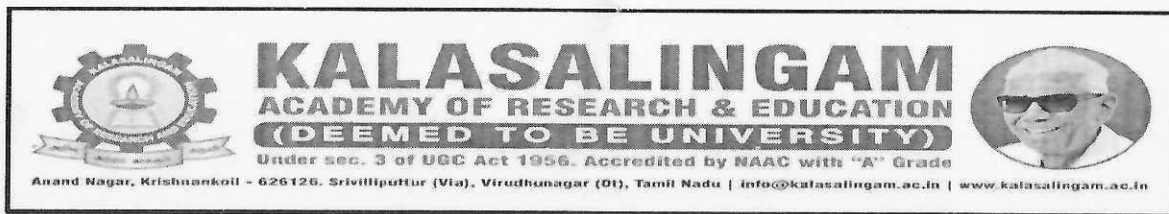
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					experiment during the laboratory session. Proof of the same i.e., Report of the document is attached for reference.
15	MS. N. BHUVANESHWARY	ECE18R311	Electronic Product Design	Case Study	<ol style="list-style-type: none"> 1. Students learning rate is assessed based on viva questions and report of case study 2. Observed improvement in the Concept Mapping
		ECE18R351	Process & Device Simulation by TCAD	Interactive Quiz using Nearpod	<ol style="list-style-type: none"> 1. Through the analysis report's question-by-question analysis, students' understanding levels are evaluated. Encourages virtual mode interaction between students and teachers.
16	MR. V. RAJESH	212ECE1302	DATA Communication Networks	Hardware Demonstration	<ol style="list-style-type: none"> 1. Visit our KLU Data Center and Explain aboutb the Networking devices, Stucrure, Topology and Performnaces.. Also Provide the demop on cable Crimping and Installations.
17	Dr. C. JENILA	212ECE2303	Electronic Circuit Analysis and Design	Individual Assignment	<ol style="list-style-type: none"> 1. Students have shown active involvement in the circuit design and analysis.





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					2. Observed the curiosity in finding the practical considerations of electronic circuit design aspects.
18	Mr. J. BENNILO FERNANDES	ECE18R472	Applied Data Modelling and Deep Learning for Engineers	Flipped Class Case Study Individual Problem Statement	1. Students will be going through the reference video to attain real time problem statement 2. Case study for data mining applications 3. Individual Database collection for deep learning algorithms.
19	MR. M. RAMESH	213ECE2307	Object Oriented Programming and Data Structures using Python	Web Designing - Website Home Page UI Design for any Organization/ Application	1. Web Page Creation using TKinter Module of Python – Application 2. Students actively involved and took different sample websites/applications and created their own way of UI design

Sivakumar
Dr. P. SIVAKUMAR

Head of the Department

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