**KLS GOGTE INSTITUTE OF TECHNOLOGY**
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

## Semester-wise Innovative Teaching Practices at ECE Department KLS GIT – Prepared by Dr. Saurav Mitra

| Sr. No. | Semester & Year | Course name Course code Sem./ Faculty | Activity title | Students undergone activity | Activity details in brief | | | Attached document as proof |
|---|---|---|---|---|---|---|---|---|
| **1** | 2022-23 Odd Sem. | **Wireless Ad Hoc Sensor Networks** (Professional Elective) 18EC754 Sem VII **Dr. Saurav Mitra** | 1) 3 MALAB On Ramp Certification Courses on | Total 20 activity marks is assigned after completion of 3 courses and Link uploading | | | 1) All 3 certification course combined Activity Report – MS Word 2) CIE Excel sheet with highlighted activity points for all 34 students |
| | | | Wireless Communications On Ramp | 33 | 5 points | Students had to upload the certification course MATLAB certificate link in google classroom and in their LinkedIn account | |
| | | | Introduction to Linear Algebra with MATLAB | 32 | 10 points | | |
| | | | Optimization On Ramp | 33 | 5 points | | |
| **2** | 2022-23 Even Sem. | **Electric and Hybrid Vehicles** (Professional Elective) 18EC656 Sem VI **Dr. Saurav Mitra** | 1) 5 MALAB On Ramp Certification Courses on | Total 20 activity marks is assigned after completion of 3 courses and Link uploading | | | 1) All 5 certification course combined Activity Report – MS Word 2) CIE Excel sheet with highlighted activity points for all 42 students |
| | | | Control Design On Ramp with Simulink | 41 | 3 points | Students uploaded the certification course MATLAB certificate links in google classroom and in their LinkedIn account | |
| | | | Power Electronics Simulation On Ramp | 42 | 3 points | | |
| | | | Simscape On Ramp | 41 | 4 points | | |
| | | | Simulink fundamentals | 42 | 8 points | | |
| | | | Simulink On Ramp | 41 | 2 points | | |
| | | | 2)Tata Motors Internship 1 | 20 | 60 Hrs. internship, after college | | Reports attached Students got selected in Mercedes Benz, KPIT, Daimler Truck etc. |
| | | | 3)Tata Motors Internship 2 | 18 | | | |
| | | | 4) Industry visit 1 | 20 | Tata Motors Manikbag Centre | | |
| | | | 5) Industry visit 2 | 18 | | | |
| | | | 6) IPPAI NETT Zero SpeakFest at Belgundi | 18 | Prize Winners with Rs 5000/- Prize money for the on the spot talk / extempore competition – report attached | | |

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| **3** | 2023-24 Odd Sem. | **Signals and Systems**<br><br>(Core Course)<br><br>22EC34<br>Sem III<br><br>**Dr. S. Mitra**<br>**Prof. Jyothi BR**<br>**Dr. Pandurangi** | 1) 5 MALAB On Ramp Certification Courses on | Total 20 activity marks is assigned after completion of 3 courses and Link uploading | | 1) All certification course combined Activity Report – 2) CIE Excel sheet with activity points for all 67 students |
| | | | Signal Processing | 63 | Students uploaded the certification course MATLAB certificate links in google classroom and in LinkedIn | |
| | | | Linear Algebra | 60 | | |
| | | | Choice On Ramp ML, DL, Image Proc. etc | 58 | | |
| | | | 2) Course Activity PPT & Presentation | 12 | 6 students presented activity PPT in GIT. Attended paper competition in Davanagere College of Engg. | Won first prizes in paper presentation competition |
| | | | 3) IITB Spoken Tutorial Course in SS | 183 | Students listened through the course videos and finally attended exam | Topper Shubham K.88.89% Report attached |
| | | | 4) Industry expert lecture | 78 | Mr. Renjith from GE was invited | Report attached |
| | | **Modern Electric, Hybrid, and Fuel Cell Based Vehicles**<br><br>(Open Elective)<br><br>21EC553 - Sem V<br><br>**Dr. Saurav Mitra** | 5) Course Activity Presentation – 2 in a Group – any branch | 79 | All the students prepared PPT on the given topic from vehicular domain – from their engineering background | Excellent response from all students, Improved their presentation skill |

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| **4** | 2023-24 Even Sem. | **Control Systems** (Core Course) 22EC43 Sem IV **Dr. Saurav M. Prof. Jyothi BR Dr. Suresh K. Prof. Deepak Kulkarni** | 1) Expert lecture conducted by MathWorks Expert Dr. Debanand S. | 60 | Digital twin preparation using MATLAB and SIMULINK, system modeling and related studies and resources was discussed by expert | Good response received from the students. Report attached |
| | | | 2) MATLAB webinar series – first session on 1/6/2024 on Being Industry Ready with System Modeling Skills | 251 GIT students and faculties | Arul Selvan, Pradnya G. Niveitha M. from MATLAB conducted 3 hours session on Industry Readiness of the students with System Modeling Skills | Certificate attached for Dr. Mitra. Students and faculties responded well. |
| | | | 3) 3 MALAB On Ramp Certification Courses on | Total 20 activity marks is assigned after completion of 3 courses and Link uploading | | 1) All certification course combined Activity Report – 2) CIE Excel sheet + activity points for 67 students |
| | | | Control Design on Ramp with Simulink | 191 | Students uploaded the certification course MATLAB certificate links in google classroom and in LinkedIn | |
| | | | Simscape On Ramp | 186 | | |
| | | | Simulink On Ramp | 186 | | |
| **5** | 2024-25 Odd Sem. | **Digital Signal Processing** (Core Course) 22EC53 Sem V **Pr. Vishwesh Dr. S. Mitra Dr. Anupama** | 1) 2 MALAB On Ramp Certification Courses on | Total 20 activity marks is assigned after completion of 3 courses and Link uploading | | 1) All certification course combined Activity Report |
| | | | MATLAB Fundamentals – 16 hours course | 201 | Students uploaded the certification course MATLAB certificate links in google classroom and in LinkedIn | |

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| **5** | 2024-25 Odd Sem. | **Digital Signal Processing** (Core Course) 22EC53 Sem V **Pr. Vishwesh Dr. S. Mitra Dr. Anupama** | Filter Design and Analysis Methods On Ramp – 2 hours course | 186 | Students uploaded the certification course MATLAB certificate links in google classroom and in LinkedIn | 2) CIE arks with activity points for 67 students of C Division attached |
| | | | 2) Expert lecture conducted by Dr. Bhushan Patil, DSP Expert | 132 | Topics were discussed related to multimedia signal processing (MMSP) from multiple media types - speech, audio, images, text etc. Compression: Fast, efficient, reliable transmission & storage, report added | |
| | | **RMIPR** (Core Course) 22AECEC56 Sem V **Dr. Uttam D. Dr. S. Mitra Dr. Sagar. S.** | 3) 2 MALAB On Ramp Certification Courses on | | Common Data analytics Tech (68 No.), Explore Data with MATLAB Plots (68 No.) certificates | All certification course combined Activity Report |
| | | | 4) 1 week online FDP on Data analytics & Visua-lization, by PANTECH | | 2 students had completed this paid course and submitted the completion certificates | |
| | | | 5) Course Activity PPT & Presentation | 68 students, 22 groups | Students selected 3 latest research papers in the field from good journals (5 marks). Then prepared PPT and presented them in group (15 marks) – activity PPT for few groups attached as activity report | |
| **6** | 2024-25 Even Sem. **Current Semester** | **Control Systems** (Core Course) 22EC43 Sem IV **Dr. S. Mitra Prof. Deepak Dr. Jyothi BR Prof. Nikhil I. Dr. PVG** | 1) 2 MALAB On Ramp Certification Courses on a) Control Design On Ramp with Simulink & b) Introduction to Motor Controlled are given to students | a) 11 completed b) 5 completed | Deadline for completion of the certification courses are in the month of May 2025. Few students have completed the certifications. | Intermediate report attached with notices and certificates for the two courses. |

## KLS GOGTE INSTITUTE OF TECHNOLOGY
### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

**Event Based Innovative Teaching Practices at ECE Depart. (<u>Some More Reports</u>) – Prepared by Dr. Saurav Mitra**

| Sr. No. | Semester & Year | Course name Course code Sem./ Faculty | Activity title | Students undergone activity & Activity details in brief | Attached document as proof |
|---|---|---|---|---|---|
| 1 | Odd 2024-25 | Design Thinking Prof. Pratijnya SA | Participation In Avalanche | Students participated in Paper Presentation and Idea Pitching. Names - Sushmita Patil, Supriya Guranalli and Prarthana Nashi. Won the 4th position & Cash prize in Sharp Tank competition. | Report attached |
| 2 | | 22EC51 Activity Based Learning Prof. Pratijnya SA | Debate, group discussion and industry visit, poster presentation were organized by the faculty | Students participated at Poster Presentation At BLDEACET, Bagalkot depicting their time management, teamwork and soft skills. | Report attached |
| 3 | | Dr. Anil Gavade | Research Based Project Activity | This research project focuses on leveraging Artificial Intelligence techniques to analyse climate change patterns and their impact on coral reef ecosystems. The study aims to provide valuable insights for environmental sustainability & conservation efforts. | Report attached |
| 4 | | 22AECEC56 RMIPR Dr. Sagar Santaji | Activity based learning on 13/12/2024 &18/12/2024 | Students groups were given to carry out research and analyse functioning of the Coffee shop of GIT, Placement process at GIT & cultural fest "Aura" | Report attached |
| 5 | | Dr. Bhagyashri Pandurangi | Industry Interaction Impact Analysis – Cybersecurity Based Research – 24/10/2024 | Collaboration with Harman International - HARMAN International is a global leader in connected car technology, lifestyle audio innovations, design and analytics, cloud services and IoT solutions. HARMAN offers a line of cybersecurity solutions that protect the vehicle and passengers alike as they become more connected than ever before | Report attached |

## Event Based Innovative Teaching Practices at ECE Depart. (<u>Some More Reports</u>) – Prepared by Dr. Saurav Mitra

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| 6 | Odd 2024-25 | Dr. Vikrant Shende | Role Play Activity 22EC542, Sem V Operating Systems **Shortest Job First** | The Role Play activity was based on FIRST COME FIRST SERVE [FCFS] "First come, first served" (FCFS) is a principle or method where the first person or entity to request or arrive at something gets priority over others. | Report attached |
| 7 | | | Role Play Activity 22EC542, Sem V Operating Systems **Priority Scheduling** | Priority Scheduling is a CPU scheduling algorithm that selects the process to execute based on its priority. Processes are assigned a priority value, and the CPU is allocated to the process with the highest priority. | Report attached |
| 8 | | Prof. Sneha Nargundkar 21EC36 | Course seminars for 12 groups in **Constitution of India course – for A , B, C Divisions students on 6/1/2023** | Seminars were conducted during regular lecture hours starting from 16th January 2023 followed by the skits. This activity was considered towards 2nd assignment. Groups having seminars have to prepare the ppts and present in class. PPTs were uploaded in Google classroom. | Report attached |
| 9 | | **Skill Development Courses for Sem III & V Students** | **In Odd 2024-25 sem, the courses were conducted for ECE GIT students** | **All the students of sem III and sem V had gone through the skill development courses. For each class, the event was conducted for one week.** | **Detailed Report attached** |
| 10 | | **Certification Course** | **Conducted in Even 2023-24 & Odd 2024-25 sem, by ECE faculties** | **Paid course for GIT students. Special courses and topics other than regular syllabus topics were taught.** | **Report attached** |

*Saurav Mitra*

**Consolidated Report Prepared by Dr. Saurav Mitra**
**(Professor ECE, KLS GIT)**

**HOD ECE KLS GIT**
**Dr. Supriya S. Shanbhag**