

5.5 Innovations by the Faculty in Teaching and Learning

1.Multimedia Learning Process:

The faculty are using multimedia elements LCD projectors in the Classroom. It will help the faculty to represent the content in a more meaningful way using different media elements.

2.PPT & Videos

Each subject, the slides are created with animations. For certain topics videos is shown and then the teaching is continued to provide a realistic overview and better understanding.

3.Quiz

The Quiz is used as an assessment tool to improve the instructional methods and student feedback through the teaching and learning process. They learn to work in a team

4.Modern Tool Usage

Modern tools like Pspice, Matlab, Keil software, etc are used in conducting the experiments.

5.Project and mini projects:

By doing projects and mini-projects the students will be able to apply the theoretical knowledge taught in the class practically.

6.Guest Lectures

Lectures are arranged on the topics of the subject and other subject related to current technologies.

Details of innovative teaching methods adopted for few subjects are listed in the below table 5.5 (i)

Table 5.5(i): Innovative teaching methods adopted for few subjects

Sl.No	Sem	Subject	Faculty	Innovation Method
1	I	Basic Electrical Engineering	Rajendra G	PPT and Kit
2	I	Elements of Electrical Engineering	Rajendra G	PPT ,Measurement and testing of Electrical parameters with Multimeter
3	I	Renewable Energy Sources	Kantesh D C	PPT and Working Model Display
4	4	Electric Motors	Vinaychandrika K	PPT and Cut Sections

5.7.2 Sponsored Research

2023-2024

SL.NO	Project Title	Duration	Funding Agency	Amount
1	Step Solar Still	12 Months	K-Tech NAIN	
2	Design and fabrication of Box Type of Solar Cooker	12 Months	K-Tech NAIN	
3	Design and Fabrication of Improved Parabolic Trough	12 Months	K-Tech NAIN	

2024-2025 (CAY)

SL.NO	Project Title	Duration	Funding Agency	Amount
1	RECYCLING PLASTIC BOTTLES INTO SUSTAINABLE 3D PRINTING FILAMENT AND ELECTRICAL INSULATOR MATERIAL	6 months	KSCST	6500.00
2	DESIGN AND DEVELOPMENT OF A PYRAMID SOLAR STILL USING PHASE CHANGE MATERIAL AS STORAGE MEDIUM	6 months	KSCST	5500.00
3	SOLAR BIOMASS HYBRID DRYER FOR FARMERS AND RURAL COMMUNITY	6 months	KSCST	6000.00
4	IMPROVED BIOMASS COOK STOVE FOR RURAL AND MOUNTAINOUS	6 months	KSCST	5000.00

2023-2024 (CAYm1)

SL.NO	Project Title	Duration	Funding Agency	Amount
1	M SHAPE LOW-COST SOLAR STILL FOR RURAL AND ISOLATED COMMUNITIES	6 months	KSCST	4000.00
2	HARNESSING WIND ENERGY FROM VERTICAL AND HORIZONTAL AXIS WIND TURBINE	6 months	KSCST	4500.00

2022-2023(CAYm2)

SL.NO	Project Title	Duration	Funding Agency	Amount
-------	---------------	----------	----------------	--------

1	DUAL OPERATING PARABOLIC TROUGH RECEIVER FOR FOOD COOKING AND HOT WATER GENERATION FOR RURAL AREAS	6 months	KSCST	6500.00
2	DESIGN AND FABRICATION OF STEP SOLAR OVEN USING SENSIBLE HEAT AS STORAGE MEDIUM FOR REFUGEE CAMPS	6 months	KSCST	5000.00

2021-2022 (CAYm3)

SL.NO	Project Title	Duration	Funding Agency	Amount
1	STEP SOLAR STILL: DESIGN MODIFICATION IN SOLAR STILL AND INCORPORATION OF PHASE CHANGING MATERIAL TO INCREASE THE EFFICIENCY OF STEP SOLAR STILL	6 months	KSCST	6000.00
2	WIRELESS CHARGING LANE FOR ELECTRIC VEHICLE	6 months	KSCST	7000.00

5.7.3 Development Activities

Details of Product Developed by Faculty and Students

SL.NO	Project Title	Student Names
1	Step Solar Still	
2	Design and fabrication of Box Type of Solar Cooker	
3	Design and Fabrication of Improved Parabolic Trough	

Research Laboratories: NIL

Instructional Materials

Sl.No	Details
1	Lab Manuals
2	Assignments
3	PPTs
4	Mini Projects
5	Lab description Chart

2.2.3 Quality of student projects

2.2.3. A. Identification of Projects and allocation methodology to faculty members

- The Head of the Department will nominate one project coordinator at department level to look after the complete process related to student's projects. Project coordinator will address the students regarding guidelines of the final year students' project along with formats to be followed related to projects.
- Project coordinator inform final year students to formulate the project group comprising maximum of 4 students in each group for their final semester project in a given format.
- Project coordinator shall collect all the students' project group information and make one consolidated project batch list of the department.
- The project work has two phases, in first phase the students are encouraged to identify the project based on their interest. Students shall identify the project themes in discussion with guide based on thrust areas recommended by the various funding agencies such as KSCST/VGST etc. Students can also take up the projects identified / initiated by faculty members based on their area of research etc.
- The guides are allocated based on their specialization or interest by the project coordinator and Head of the Department.
- Finalized project synopsis duly signed by their concerned guide is submitted to coordinators.

Identification of Projects and allocation methodology to faculty members is shown in Figure 2.2.3.A

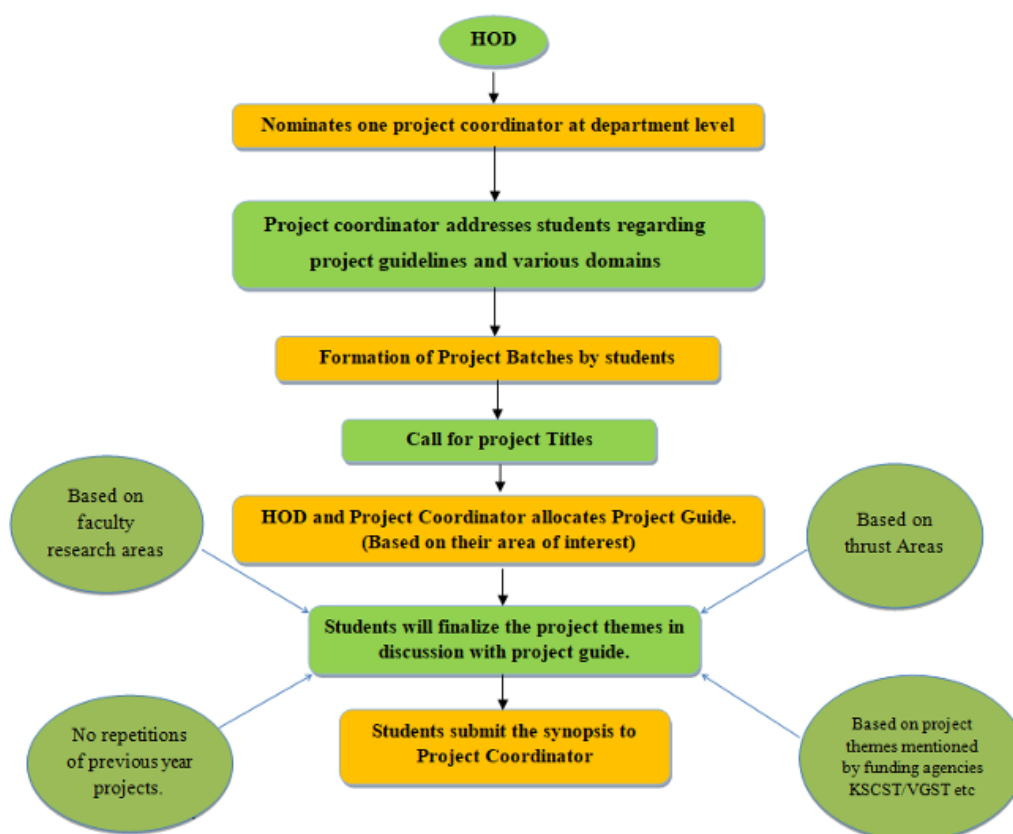


Figure 2.2.3.A Identification of Projects and Guide Allocation Methodology