

DEPARTMENT OF CIVIL ENGINEERING
VASAVI COLLEGE OF ENGINEERING, HYDERABAD

Innovations by the Faculty in Teaching and Learning

The faculty of Civil Engineering Department, Vasavi College of Engineering work tirelessly towards inculcating innovative methodologies to enhance Teaching and learning experience. Innovations by the Faculty in teaching and learning are summarized as described below.

1. Learning through recorded videos and making videos

S N o	Subject	Name of the faculty	Link	Brief explanation
1	Basic Engineering Mechanics	<u>Sri. G. Raghavendra</u>	https://drive.google.com/drive/folders/1NE83e9Gx7ulvboCaIJqCi0AQkRJ10wIZ?usp=sharing https://www.youtube.com/playlist?list=PLUjOo3EThTMreqEradLkRMEYcVYapz4MZ	The some topics in Basic Engineering Mechanics are explained through models
2	Engineering Drawing	<u>Mr.S.Keshav Kumar</u>	https://drive.google.com/drive/folders/1G2WNHn9OB3AC8VFN26Vm7IJRqOCWHRRI?usp=sharing	The course on Engineering drawing through videos
3	GIS Laboratory	<u>Dr.K.Jayasree</u>	Sample videos: https://www.youtube.com/playlist?list=PLUjOo3EThTMqFrd78vjncf1cbuBjXggoR https://youtu.be/eebe0j2SU2o https://youtu.be/uzT_3_3pDJM	The entire laboratory is demonstrated with videos
4	Surveying Camp	<u>Mr.MVSSSastry / Dr.K.Jayasree</u>	https://www.youtube.com/watch?v=HXlkuQdNGfM&t=321s https://youtu.be/Z1aCLdPIxQE	During Surveying camp, students are asked to prepare videos and upload in you tube
5	Induction Program	Mr.Surya Prakash	https://www.youtube.com/watch?v=a573DM2RQs	Recordings of Adjunct faculty are made and uploaded for further reference
6	Highway Engineering Lab	<u>Dr.K.Jayasree</u>	Sample video: https://drive.google.com/file/d/1qg1oElsI6krSCYV66XfAcifF0m5ICOGk/view?usp=sharing	The lab videos demonstrating the experiment with relevant explanation are made and uploaded.

2. Collaborative tools

Engineering is more about team work where the plan put together by selected few in the management needs to be executed by a large number of people working at ground level. Unlike classical times there are a lot of tools available which students are encouraged to use collaboratively to collect structure & assimilate knowledge from different resources.

S. No	Name of the tool	Courses benefited
1	MS Teams for notes sharing. Important Links to additional material i.e. websites, videos, journals	All courses
2	Digital Boards	Engineering Graphics Foundation Engineering Building Technology

3. On site teaching with Live practices

S No	Innovative Teaching Method & Features provided	Courses benefited
1	Brick Bond making in the field	Building Technology
2	Bar bending schedule	Reinforced Concrete Design
3	3D Models	Engineering Graphics /Engineering Drawing
4	Field data collection at traffic signal	Transportation Engineering
5	Field visit to construction site	Building Technology

1. Working models on various types of reinforcements



One way slab reinforcement



Two way slab reinforcement



Beam Column and Footing Reinforcement



Typical Column Reinforcement with lateral ties



Bending Bench (Bending of strifus)



Two span Beam Reinforcement Details

4. Virtual Labs

Virtual labs are another way the limitations provided by the physical labs can be overcome. The students can conduct experiments in a simulated environment developed by software engineers which give them a near identical experience of having actually conducted the experiment in the lab.

S No	Name of the Lab	Link
1	Hydraulic Machinery Lab	http://eerc03-iiith.vlabs.ac.in/exp1/Introduction.html?domain=Civil%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20%20Engineering&lab=Hydraulics%20and%20Fluid%20%20%20%20%20%20%20%20%20%20%20Mechanics%20Lab
2	Surveying Lab	http://sl-iitr.vlabs.ac.in/sl-iitr/
3	Soil Mechanics Lab	http://smfe-iiith.vlabs.ac.in/List%20of%20experiments.html?domain=Civil%20Engineering
4	Strength of Material Lab	http://sm-nitk.vlabs.ac.in/#
5	Transportation Engineering Lab	https://ts-nitk.vlabs.ac.in/

5. Learning through competitions

S No	Innovative Teaching Method & Features provided	Courses benefited
1	Model presentation	Building Technology, Transportation Engineering
2	Poster presentation	Transportation engineering
3	Abstract it	Structural engineering, Environmental engineering, Transportation Engineering, Soil mechanics
4	Alternative theory contest	Communication skills
5	Leaflet contest	Entrepreneurship
6	Brain teaser contest	All subjects

6. Learning through automation and usage of software's

S No	Innovative Teaching Method & Features provided	Courses benefited
1	Code development in python for parking analysis and development of job mix formula https://github.com/MostlyInsane/Parking-Usage-Studies/blob/master/PUS.py	Transportation Engineering
2	Code development in C for setting of curves	Surveying
3	Code development in C for structural analysis using Kanis method	Theory of structures
4	Use of QGIS software for contour map generation	Surveying
5	Use of excel for volume study , speed study and Origin destination survey analysis	Transportation Engineering

7. Extra-Curricular Activities (ECA) clubs

Extra Curricular Activity clubs have been included to enrich the students learning experience and promote holistic development.

- Toast masters club
- Writers club
- Quiz club
- Photography club

- e. Mun model
- f. Film making club
- g. Arts club
- h. Dramatics club
- i. Maths club
- j. Science club