



MKSSS's Cummins College of Engineering For Women, Pune
(An Autonomous College affiliated to Savitribai Phule Pune University)
Department of INFORMATION TECHNOLOGY



Course Name: Green IT Infrastructure and sustainability Metrics

Course Code: 23MmIT501L A

Semester: 5

Year: TY

Name of Course In-Charge: Dr. Dipti D. Patil

Name of Activity: Survey for Energy Management Framework of IT building CCEW, Pune

Objective: To provide students with experiential learning in Green IT Infrastructure by conducting a real-time survey of the IT building at Cummins College and applying the EMAN (Energy Management) Framework to evaluate sustainability metrics. The activity aims to develop students' understanding of energy-efficient networking, resource monitoring, and sustainable IT practices through analysis of network devices, smart infrastructure, energy consumption patterns, and potential energy-saving strategies. It also enhances teamwork, problem-solving, technical analysis, and report-writing skills aligned with sustainable computing goals.

Dissemination of Problem statement:

As we studied EMAN Framework. You are suppose to form group of 8 and carry out survey of IT building for evaluating Sustainable metrics for green networking by proposing the EMAN Framework for IT building of Cummins College.

Following points to be considered:

Identify approx. No of network switches, Wi-Fi access points, servers, smart classroom devices (projectors, ACs etc)

Propose method for monitoring and controlling of energy objects

Generate report on approx. Consumption and savings and your overall observations. Prepare the report and upload.

Classroom > 23MmIT501A Green IT Infrastructure and S...

Stream Classwork People Grades

Survey on Sustainability metrics ev... 1 Due Sep 12

Dear Students,
As we studied EMAN Framework. You are suppose to form group of 8 and carry out survey of IT building for evaluating Sustainable metrics for green networking by proposing the EMAN Framework for IT building of Cummins College.
Following points to be considered:
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1 class comment

View instructions Review work



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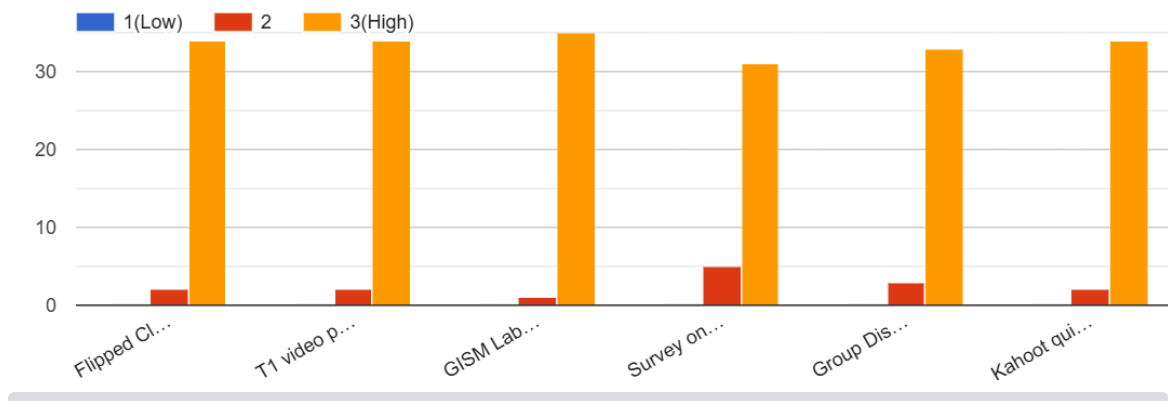
Sample of activity report attached:



Feedback of students:

Rate the pedagogy techniques we used for learning the GISM course

[Copy chart](#)



Contribution to Sustainable Development Goals (SDGs)

This assignment significantly aligns with global sustainability frameworks and directly contributes to the following SDGs:

SDG 7 – Affordable and Clean Energy

- Students evaluated energy consumption of ICT loads (fans, ACs, PCs, lighting).
- Proposed practical measures for reducing energy: LED retrofits, AC optimisation, smart controls.
- Identified ~45% load reduction potential in the IT building.
→ Contributes to energy efficiency targets under SDG 7.

SDG 9 – Industry, Innovation & Infrastructure

- Application of EMAN (Energy Management for Networked Devices) promotes smart infrastructure design.
- Recommendations such as PoE switches, virtualization, and BEMS enhance ICT infrastructure sustainability.



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SDG 11 – Sustainable Cities & Communities

- Campus buildings are a microcosm of urban infrastructure.
- Energy monitoring and optimisation improve environmental quality and resource efficiency in institutional buildings.

SDG 12 – Responsible Consumption & Production

- Students assessed consumption patterns of smart classrooms, servers, lighting.
- Proposed mindful resource usage and elimination of energy waste.

SDG 13 – Climate Action

- Reduction of ~74,334 kWh/year translates directly into lowered carbon footprint for the institute.
- Encourages climate-responsive behaviour through digital monitoring and energy-conscious operations.

SDG 4 – Quality Education

- Promotes experiential learning by integrating theory with real environmental auditing.
- Builds sustainability literacy and green technology competencies.

Impact assessment:

The survey-based EMAN assignment achieved the following:

- **Practically reinforced EMAN framework concepts** through real energy object identification and monitoring proposals.
- **Developed strong analytical, auditing, and sustainability assessment skills** in students.
- **Generated actionable insights for campus energy optimisation**, demonstrating real value beyond academics.
- **Aligned student work with multiple SDGs** by promoting energy efficiency, sustainable consumption, smart infrastructure, and climate action.
- **Encouraged green digital practices**, supporting the core objectives of the Green IT Infrastructure course.

Action taken Thereof: Such open ended assignment will be continued to be given to students

Dr. Dipti P

(Professor, IT dept., CCEW-Pune-52)