Report on Innovative Teaching methods: Activity-Based Learning

Title: Poster and Model Making Activity

Date: 10th April 2025,   Venue: CSE Department

 Coordinated by: Prof. Sushma Mule

1. Objective of the Activity

To implement Activity-Based Learning (ABL) strategies for enhancing student engagement, critical thinking, and collaborative learning through the creation and presentation of posters and models on cutting-edge topics in Computer Networks, Artificial Intelligence & Machine Learning, and Cyber Security. This initiative supports Outcome-Based Education (OBE) and promotes real-world application of technical concepts.

2. Activity Overview

The department conducted a creative and knowledge-intensive poster and model-making activity. Students were divided into groups and assigned interdisciplinary technical themes. Each group researched their topic, designed an informative poster or model, and presented their findings and designs in front of faculty and peers.

3. Key Topics Explored

- Computer Networks:

    - - OSI and TCP/IP Model Representation
    - - Network Devices and Their Functions
    - - Secure Socket Layer (SSL) and HTTPS
    - - IP Addressing and Subnetting

- Computer Networks in Artificial Intelligence & Machine Learning:

  - - Machine Learning Workflow
  - - Deep Learning Architectures (CNN, RNN)
  - - AI in Smart Cities / Smart Transportation
  - - AI-Powered Intrusion Detection Systems

  Computer Networks in Cyber Security:
  - - Types of Cyber Attacks and Their Prevention
  - - Cryptographic Algorithms (AES, RSA)
  - - Blockchain Technology and Cyber Security
  - - Digital Forensics Lifecycle

4. Learning Outcomes

Outcome Achieved	Description
Conceptual Clarity	Applied theoretical knowledge in real-world scenarios
Teamwork and Collaboration	Students coordinated and divided tasks effectively
Presentation and Communication	Improved public speaking and confidence
Creative Thinking & Innovation	Unique designs and representations showcased
Interdisciplinary Knowledge	Integrated learning from multiple subjects

5. Assessment & Documentation
- Attendance was recorded for all participating students.
- Groups were evaluated based on: Concept Clarity, Creativity, Technical Accuracy, Teamwork, and Presentation.
- Constructive feedback was shared to encourage further exploration and improvement.

6. Photo Gallery: Photos will include:
a)Students creating posters and models

b) Group presentations

c) Faculty interaction with students

d) Displays of finished work

7. Recognition and Appreciation

- Certificates of Appreciation provided to all participating students.
- Special recognition awarded to top-performing teams.
- Selected student work to be showcased on the college website and official social media platforms.

8. Conclusion

This activity allowed students to explore, design, and present advanced computing concepts creatively. It enhanced technical understanding, soft skills, and collaborative learning. The department remains committed to using such innovative approaches to elevate the academic experience and encourage experiential learning.

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