Vidyavardhini's College of Engineering & Technology

Department of Computer Engineering

Academic Year 2024-25 (Odd Sem)

Innovation activities by the faculty members in teaching-learning

Sr. No.	Name of Faculty	Course Name / Sem / Course Code	Innovative / Creative activity used	Short Description of the activity
1	Dr. Megha Trivedi	Discrete Structure and Graph Theory/III/CSC302	Audio-Video assignment	Students were asked to solve a puzzle using mathematical logic and record a video of the solution using illustration/animation.
2	Dr. Dinesh Patil	Software Engineering	Collaborative Incremental Problem-Solving (CIPS) Method	Groups of the students were created and each group of the students was asked to select a particular task. The students were asked to solve the task in an incremental way.
3	Dr. Vikrant Agaskar	ARVR/VII/CSDC7021	Brain storming	During the lecture session interested students were asked to take one real life case of the project. Every group then explored and applied every new concept learnt from each module to their selected case and elaborated.
4	Dr. Swapna Borde	ML/VII/BE/CSC701	Online Poll	Online Poll allows participants to see live results as they respond to questions. This activity adds to interaction in classroom and helps identify machine learning problems, comment, discuss and debate over it. Besides this, it gives an opportunity to the students to have a voice and take on an active role in their learning.

		DWM/V/TE-1/ CSC504	Mind Maps	Mind mapping is simply a diagram used to visually represent or outline information. It is a powerful graphic technique you can use to translate what's in your mind into a visual picture. Mind maps for preprocessing help students to note down the various tasks and techniques involved in cleaning, transforming, integration and reduction on one sheet.
5	Dr. Anil Hingmire	TE/V/Div-3/CSC602/Software Engineering	Collaborative Incremental Problem-Solving (CIPS) Method	To analyze requirement analysis and perform requirement modelling on given problem statement. The Collaborative Incremental Problem-Solving (CIPS) Method is an instructional strategy designed to engage students in progressively solving complex problems through collaborative, step-by-step analysis. In this approach, students work together to break down large or challenging problems into smaller, manageable parts, addressing each part incrementally and building on previous solutions.

		BE/VII/CSDC7013/NLP	Thought Experiment	Thought Experiment: Building a Language Model Without a Dictionary. This thought experiment explores the challenges and innovative approaches in building a language model without dictionaries or labeled data. Students tackle developing a model using only unstructured text, prompting critical thinking on unsupervised and self-supervised learning, distributional semantics, and the complexities of understanding language without predefined word meanings.
6	Ms. Smita Jawale	DS/III/SE-1/CSC303	Peer-led LeetCode Problem-Solving Presentations	A unique peer-led learning session was organized to improve students' understanding of data structures, algorithms, and competitive programming. Students chose a topic from LeetCode, presented it to the class, and shared their approach to solving coding challenges.
		ADBMS/V/TE-1/CSDLO5013	Fastest Finger First	In this Fastest Finger First activity, students are divided into different groups. The faculty assigns sets of queries on MongoDB to the students in classroom. Students have to raise hands and give solutions. The group that submits their answers first is declared the winner.

7	Mr. Sunil Katkar	CG/III/SE/CSC305	CrossWord Puzzle	Crossword puzzles are engaging ICT tools for learning that promote active participation and reinforce subject-specific vocabulary and concepts. In an educational context, crosswords encourage critical thinking, enhance memory retention, and help students learn in a fun, interactive way.
8	Ms. Swati Verma	DWM/V/TE-2 and TE3/ CSC504	Mind Maps	The topic was explained to the students first through the slides. Then they were asked to sketch mind maps in groups using charts, colors, etc.
9	Mrs. Sneha Mhatre	ADBMS/V/TE-2/CSDLO5013	Fastest Finger First	In this Fastest Finger First activity, students are divided into different groups. The faculty assigns sets of queries on MongoDB to the students in classroom. Students have to raise hands and give solutions. The group that submits their answers first is declared the winner.
		BDA/VII/BE/CSC702	Collaborative Learning-Debate	In this Activity, students asked to sit equally in 4 rows in classroom. Assigned different types of NoSQL to each row. Course instructor allotted 45 minutes time to the individual row to read the topic from reference book or any other material
10	Ms. Neha Surti	DLCOA/III/SE-1 & SE-2/CSC304	Digital Flux	Digital Flux is a real-time interactive polling which allows participants to see live results as they respond to questions. It enables real-time engagement with students offering interactivity, ease of use, and immediate feedback.

11	Ms. Aarti Puthran	TCS /V/TE-2/CSC501	Educational Tambola: A Fun Way to Learn	In this game each student receives a Tambola ticket. The faculty begins the game by randomly selecting and announcing a number (or word/symbol/letter) from the pool. For each announced number, the faculty asks a question that is linked to it. The question could be related to key concepts, definitions, problem-solving, or course-related scenarios.
		DS/III/SE-2/CSC303	Peer-led LeetCode Problem-Solving Presentations	In order to enhance students' understanding of data structures, algorithms, and competitive programming, a unique peer-led learning session was organized. Students were encouraged to select a topic from LeetCode, present it to the class, and share their approach to solving specific coding challenges.
12	Ms. Brinal Colaco	OOPM/III/SE-3/CSL304	Collaborative Learning through Textbook Exploration	Before the activity began, students were instructed to issue a Java textbook from the library. The class was then divided into groups of 10, and each group was assigned two questions on exception handling to answer and explain to the entire class. Each group was evaluated and given a score out of 10 based on the quality of their explanations.
13	Mr. Chintamani Chavan	DLCOA/III/SE-1 & SE-3/CSC304	Digital Flux	Digital Flux is a real-time interactive polling which allows participants to see live results as they respond to questions. It enables real-time engagement with students offering interactivity, ease of use, and immediate feedback.

		SE/III/R-19/Div-2/OOPJ	Java Debugging Challenge: Find and Fix	In the Java Debugging Challenge, students work in small groups to debug Java code with intentional syntax, logical, or runtime errors. Each group is given a code snippet that appears to perform a specific function but contains several errors. Their task is to identify, explain, and fix these issues to make the program run correctly.
14	Ms. Priti Rumao	TCS/V/TE-1 & TE-3/CSC501	TCS_Tambola	Tambola is a fun and easy game that can be played with numbers, letters or words. The organizer (faculty in our case) calls the number- one at a time and then asks a question associated with it. Once students have identified the answer for the said question then they need to strike Number/symbol/word/letter on their tickets.

15	Mrs. Soniya Khatu	CN/V/TE-1 & TE-3/CSC503	CN_Network Puzzle Game	A "Computer Network Jigsaw Puzzle Game" designed for students uses visual, interactive components to teach foundational concepts like the TCP/IP and OSI models, along with basic protocols (TCP, IP, DNS). Each puzzle piece represents network layers or protocol elements, challenging players to assemble the models in the correct order (e.g., OSI's seven layers or TCP/IP's four layers). As students complete levels, they explore each layer's real-world functions (application, transport, network), gaining insight into data flow across layers. Hints and feedback reinforce understanding of layer dependencies and protocol interactions, turning complex network structures into engaging, hands-on learning. Developed by students using Flutter, this project also tested their technical knowledge.
16	Ms. Bhakti Jadhav	TE Div3/ADBMS/CSDLO5013	Fastest Finger First	In this Fastest Finger First activity, students are divided into different groups. The faculty assigns sets of queries on MongoDB to the students on GCR. Students have to submit their performed queries with output to the faculty as early on GCR or WhatsApp. The group that submits their answers first is declared the winner.

17	Mrs. Manali Patekar	TE Div2/CN/CSC503	The Network Mastermind Challenge	It is an interactive quiz-based activity designed to enhance student engagement and understanding the basics of computer networking. Using Kahoot, students participate in a competitive, fast-paced environment . The activity promotes active learning, peer collaboration, and instant feedback, helping students reinforce their knowledge and identify areas for improvement. The challenge fosters motivation and creates an enjoyable learning experience while assessing the students' grasp of essential networking principles.

Academic Year 2024-25 (Even Sem)

Innovation activities by the faculty members in teaching-learning

Sr. No.	**Name of Faculty**	**Course Name / Sem / Course Code**	**Innovative / Creative activity used**	**Short Description of the activity**
1	Dr. Megha Trivedi	Optimization in Machine Learning/VIII/CSDC8021	Ant Behavior Simulation Game	Ant Colony Optimization (ACO) through interactive and engaging simulation game.

2	Dr. Satish Salunkhe	SE/IV/ Database Management system/CSC403	Debugging Database Task Oracle Academy course certification	This task is to identify, analyze, and resolve errors or anomalies in database systems. This involves debugging SQL queries, correcting schema design issues, ensuring data integrity. Oracle Academy designed modules certification courses conducted in the laboratory.
3	Dr. Dinesh Patil	Operating System/IV/CSC404	Drama on Deadlock	The students were asked to create a deadlock situation and provide the ways to come out of it.
4	Dr. Vikrant Agaskar	PM/VIII/ILO8021 IoT/VI/CSDLO6011	Brain storming Peer Teaching	During the lecture session students were asked to take one real life case of the project. Students proposed a few cases and then with discussion amongst themselves selected one case. All the students then explored and applied every phase of the project management process to the selected case. This activity gave students confidence to apply knowledge of Project Management to any real-life project. Students were encouraged to deliver a lecture for an hour on the topic of their choice from the syllabus. A group of students voluntarily presented a topic for around 45 minutes. The session was interactive and the fellow students were encouraged to ask doubts which were solved by presenting students and the subject teacher.

5	Dr. Swapna Borde	Analysis of Algorithm/IV/CSC402	Role Play	Students were assigned some value. Then they were told to arrange themselves as per the steps of Selection Sort and Insertion Sort Algorithms. This method encourages participation and improves understanding of topics.
6	Dr. Anil Hingmire	Artificial Intelligence/TE1 and TE3/VI	AI Riddles & Brain Teasers	The activity was conducted to reinforce AI concepts through an interactive quiz format. Students were presented with a series of riddles, puzzles, and clues that hinted at various AI tools, concepts, and applications.
7	Ms. Smita Jawale	SE/IV/ Database Management system/CSC403	Debugging Database Task	This task is to identify, analyze, and resolve errors or anomalies in database systems. This involves debugging SQL queries, correcting schema design issues, ensuring data integrity.
8	Mr. Sunil Katkar	SE Sem-IV Div-1 Microprocessor	Treasure Hunt	This activity is designed as a treasure hunt where students will form groups and find hidden clues and collect them. Once all clues are collected as an output of clues they will write an assembly language program.
9	Dr. Swati Varma	Distributed Computing/ BE/VIII/ CSC801	Autopsy of any distributed System	Autopsy of distributed systems like UBER, Amazon, Netflix and Google Search to identify the key techniques/methods used by them.
10	Mrs. Sneha Mhatre	Mobile Computing/TE 1 & TE 3/VI/CSC603	Written Test on GSM Abbreviations	GSM System Architecture explained in the class. Then students were asked to remember the abbreviations of GSM. This method encourages participation and improves Understanding of topics.

11	Ms. Neha Surti	System programing and Compiler Construction / TE 1/ TE 3 CSC601	Pass the Mic	Pass the Mic is designed to make learning interactive and engaging on topics like Macro Processor and LL1. Students, divided into three groups, discussed assigned questions for 5 minutes and presented their answers as the mic was symbolically passed. This method encouraged participation, teamwork, and improved conceptual understanding.
12	Ms. Brinal Colaco	BE/VIII/Applied Data Science/CSDO8013	Role-Playing	The objective of this role-playing activity was to foster an interactive and innovative learning environment where students could take on specific roles in a data science project—such as data scientists, business stakeholders, and end-users—and collaboratively brainstorm key concepts and real-world challenges in the domains of Hypothesis Testing, Clustering, Time Series Forecasting, Recommendation Engines
13	Mr. Chintamani Chavan	Analysis of Algorithm/SE/IV/	Role Play	The students acted out the logic of sorting and searching algorithms by taking on the roles of elements, pointers, and comparators. Students are physically engaged with algorithmic logic which encourages group problem-solving and teamwork.

		Artificial Intelligence/TE2/ VI	AI Riddles & Brain Teasers	The activity was conducted to reinforce AI concepts through an interactive quiz format. Students were presented with a series of riddles, puzzles, and clues that hinted at various AI tools, concepts, and applications.
14	Ms. Priti Rumao	Operating System / SE2/ IV	Open Book Test	The activity is designed to enhance students' conceptual understanding of various CPU scheduling algorithms by engaging them in an interactive, practical, and experiential learning environment.
		Mobile Computing/TE2/ VI	Open Book Test	The activity is designed to enhance students' conceptual understanding of various CPU scheduling algorithms by engaging them in an interactive, practical, and experiential learning environment.
15	Mrs. Soniya Khatu	Microprocessor/ SE2 and SE3 /IV	Treasure Hunt	This activity is designed as a treasure hunt where students will form groups and find hidden clues and collect them. Once all clues are collected as an output of clues they will write an assembly language program.
16	Ms. Bhakti Jadhav	Cryptography and System Security / TE3/ VI	Cryptocracker	The activity is designed as a crypto challenge where individuals solve encryption and decryption codes using different classical and modern cryptographic techniques
		Operating System / SE1/ IV	CPU Wars: The Scheduling Game	The activity is designed to enhance students' conceptual understanding of various CPU scheduling algorithms by engaging them in an interactive, practical, and experiential learning environment.

17	Mrs. Manali Patekar	Cryptography and System Security / TE2 & TE3/ VI	Cryptocracker	The activity is designed as a crypto challenge where individuals solve encryption and decryption codes using different classical and modern cryptographic techniques. This innovative activity not only reinforced core cryptography concepts but also fostered a fun and interactive learning environment.
18	Ms. Joyce Dsouza	Quantitative Analysis/ TE1, TE2 & TE3/ VI/ CSDLO6013	Quantitative Jeopardy	Quantitative Jeopardy is a game-based learning activity that follows the format of the classic Jeopardy! game but focuses on quantitative reasoning, mathematics, and numerical problem-solving. It is often used in educational settings to reinforce mathematical concepts, data analysis, and logical reasoning.
19	Ms. Vinal Waghela	System programing and Compiler Construction / TE 2 CSC601	Pass the Mic	Pass the Mic is designed to make learning interactive and engaging on topics like Macro Processor and LL1. Students, divided into three groups, discussed assigned questions for 5 minutes and presented their answers as the mic was symbolically passed. This method encouraged participation, teamwork, and improved conceptual understanding.

Dr. Megha Trivedi
HOD, Computer Engineering