



Smt Indira Gandhi College of Engineering

Ghansoli – Navi Mumbai

Computer Engineering Department

Innovation in Teaching Learning Process - A. Y. 2024-25 Odd Sem							
Sr. No	Faculty Name	Subject	Class	Sem	Innovative Category	Innovative Method	Available On Website
1	Dr. K T Patil	CN	TE	V	Activity Based Learning	Memory Map	Y
2	Dr. K T Patil	CN	TE	V	Teaching Enhanced Blended Learning	Google Classroom	Y
3	Prof. Satish Kuchiware	DWM	TE	V	Teaching Enhanced Blended Learning	Google Classroom	Y
4	Prof. Satish Kuchiware	DSL	SE	III	Project Based Learning	Mini Projects / Case Study	Y
5	Prof. Satish Kuchiware	DS	SE	III	Experimental Learning	Industry Based Training	Y
6	Prof. Revti Jadhav	DLCA	SE	III	Teaching Enhanced Blended Learning	Virtual Lab	Y
7	Prof. Vaishali Yeole	BDA	BE	VII	Activity Based learning	Group Discussion	Y
8	Prof. Deepti Chandran	NLP	BE	VII	Activity Based Learning	Brainstorming Session	Y
9	Prof. Jaspreet Kaur	CSL	BE	VII	Activity Based learning	Flipped Classroom	Y

Innovations by the Faculty in Teaching and Learning

Category of Innovation method: Activity Based Learning- Memory Map

A. Y. : 2024-25 (Odd Sem)

Class : TE Comp

Course: Computer Network (CSC503)

Faculty Name: Dr. K. T. Patil

Goals / Objective of the method:

1. To make students remember difficult units by repetative practice.
2. To make remembering easy with some tricks.

Topic covered: OSI Layers

Description of method:

Students find it difficult to remember OSI 7 layers names in correct order. OSI 7 layers - **A**pplication, **P**resentation, **S**ession, **T**ransport, **N**etwork, **D**atalink & **P**hysical. Students were told to make a sentence staring with initial alfabet of every layer name in sequence. All students involved in making sentence. Final senence framed was " **A**ll **P**arents **S**tand **T**owards **N**orth **D**irection **P**lease". After chanting this sentence at the begining of few lectures by all students combinely, they remembered this sentence and thus the names of all layers in correct order.

Benefits of the method:

- As all students were chanting this sentence, those who were missing also learned and remembered the sentence and thus OSI layers names correctly.
- Group activities promote teamwork and good learning.
- Remembering the contents in proper order becomes easy.
- Students remember it over long period even life long.

For review and critique contact: kishor.patil@sigce.edu.in

Review and Critique:

Students Enjoyed chanting in class and no critics receieved as such.

Action taken based on review and critique:

None

Innovations by the Faculty in Teaching and Learning
Category of Innovation method: TEBL
Title of Innovation method: Google Classroom
Faculty / Inventor: Dr. K T Patil
A. Y. : 2024-25 (Odd Sem)
Course Name and Code: Computer Network (CSC503)
Class : TE Comp
Goals / objective of the method:
1. To provide a digital repository of course material for students and peers.
2. To foster a habit of self-directed learning through digital Course content.
3. To create a platform for sharing academic resources and evaluation.
Topic covered: Computer Network
Description of method:
The Google Classroom, serves as dynamic platform for sharing, managing and evaluating course work. Students can access material at any time. resource.
Benefits of the method:
1. Provides a readily accessible knowledge-sharing platform.
2. Enhances student's learning experiences by complementing classroom instruction.
3. Encourages peer-to-peer learning through discussions and comments.
For review and critique contact: kishor.patil@sigce.edu.in
Action taken based on review and critique:
Feedback emphasized the importance of including more multimedia content like videos and info graphics. Adding important question bank. These have been added to enhance visual learning.

Innovations by the Faculty in Teaching and Learning

Category of Innovation method: Teaching Enhanced Blended Learning - Google Classroom

A. Y. : 2024-25 (Odd Sem) Class : TE Comp Course: Data Warehousing & Mining (CSC504)

Faculty Name: Prof. Satish Kuchiware

Goals / objective of the method:

1. To create a platform for sharing course resources and evaluation.
2. To motivate self-directed learning through digital Course content.

Topic covered: Data Warehousing & Mining

Description of method:

Google Classroom is a powerful tool for students, providing a centralized platform for managing coursework, assignments, and communication. Its accessibility, organization, and integration with Google Workspace are significant strengths that benefit students.

Benefits of the method:

1. Offers an easily accessible platform for sharing knowledge
2. Enhances student's learning experiences by following classroom instruction.
3. Fosters peer-to-peer learning by facilitating discussions and comments.

For review and critique contact: satish.kuchiware@sigce.edu.in

Review and Critique:

However, the platform has limitations, such as the need for a stable internet connection and limited customization.

Action taken based on review and critique:

Google Classroom is a solid platform for managing learning but could be further optimized to better address the diverse needs of students.

Innovations by the Faculty in Teaching and Learning

Category of Innovation method: Project Based Learning - Mini Projects / Case Study

A. Y. : 2024-25 (Odd Sem)

Class : SE Comp

Course: Data Structure Lab(CSL301)

Faculty Name: Prof. Satish Kuchiwale

Goals / objective of the method:

To enhance practical knowledge, programming proficiency, and problem-solving capabilities

To improve analytical and problem-solving skills to implement algorithms for various applications

Topic covered: Mini Projects / Case Study

Description of method:

Given a task to students to create Mini Project on DS by applying DS concepts. Students must implement the assigned task. Finally they need to give presentation & demonstrate in front of entire class about the assigned task. There are two to three members in each group. It is a group activity. In this activity the students can develop their presentation skills and also enhance communication skills

Benefits of the method:

- Gain knowledge to design and develop applications for solving real world problems.
- Group activities promote teamwork and communication skills.

For review and critique contact: satish.kuchiwale@sigce.edu.in

Review and Critique:

Students took the opportunity to express their ideas and queries regarding the mini project given. Peer to peer collaboration was effective.

Action taken based on review and critique:

Students asked to explore and implement all possible solutions which was identified and discussed in the session.

Innovations by the Faculty in Teaching and Learning

Category of Innovation method: Experimental Learning- Industry Based Training

A. Y. : 2024-25 (Odd Sem)

Class : SE Comp

Course: Data Structure (CSC303)

Faculty Name: Prof. Satish Kuchiware

Goals / objective of the method:

1. Promote Experimental Learning
2. Training by industry experts – learn from the best
3. A Digital Certificate to boost your credentials
4. FREE access to cutting-edge resources

Topic covered: Online 30 Hours Training Program on Data Structure and Algorithms by ExcelR

Description of method:

A Industry Based Training is an instructional approach where Industry trainers train the students in online mode after college hours (15 days - everyday 2 hours). Students can learn new content from experts through interactive sessions. They get engaged in interactive, hands-on activities during session to apply their knowledge, ask questions, and collaborate with peers.

Benefits of the method:

- Gain knowledge for solving real world problems / applications.
- Exposure to Industry Trends.
- Skill Enhancement.

For review and critique contact: satish.kuchiware@sigce.edu.in

Review and Critique:

The success of industry training depends on the program's quality, company support, and the student's ability to navigate the environment. While it offers significant benefits, challenges

Action taken based on review and critique:

Students should approach industry training with realistic expectations, recognizing that while the experience is valuable, it is just one part of their overall career development.

Innovations by the Faculty in Teaching and Learning		
Category of Innovation method: Teaching Enhanced Blended Learning (TEBL)- Virtual Lab		
A. Y. : 2024-25 (Odd Sem)	Class : SE Comp	Course: DLCA(CSC304)
Faculty Name: Mrs Revti Jadhav Goals / objective of the method: <ol style="list-style-type: none"> Promote Active Learning Improve Understanding of concepts Maximize Classroom Time Foster Self-Paced Learning Topic covered: NS2,NS3		
Description of method: <p>Virtual labs allow students to access experiments and educational resources from anywhere with an internet connection, breaking down geographical barriers and promoting inclusivity</p>		
Benefits of the method: <ul style="list-style-type: none"> Students can learn at their own pace, revisiting experiments and modifying variables as needed, fostering a deeper understanding of concepts Virtual labs are accessible anytime, allowing students to engage in learning and experimentation at their convenience 		
For review and critique contact: revti.jadhav@sigce.edu.in		
Review and Critique: <p>Virtual labs often include tools for data analysis and visualization, helping students to analyze and interpret experimental results</p>		
Action taken based on review and critique: <p>Dought clearing session was conducted in lab to solve the dificulties of the students.</p>		

Innovations by the Faculty in Teaching - Learning
Category of Innovation method: Activity Based Learning
Title of Innovation method: Group Discussion
Faculty Name: Dr. Vaishali Yeole
A. Y. : 2024-25 (Odd Sem)
Course Name and Code: (CSC702)
Class : BE Comp
Goals / objective of the method:
GD is a method where the group of participants share their views and opinions on a given topic within specific duration. Goal is to check the understanding of the topic and build GD confidence. To participate in the GD, students should have proper understanding of the Topic and also they should have communication skills.
Topic: The Role of Big Data in AI and Machine Learning.
Description of method:
1. Given topic was taught to students in the classroom.
Benefits of the method:
•Group discussions promote deeper understandings of the topic.
For review and critique contact: vaishali.yeole@sigce.edu.in
Review and Critique:
Some students were not able to express/talk confidently. Many students used this method as an opportunity
Action taken based on review and critique:
Students who had faced talking issue, were motivated and encouraged to talk and thus they also participated.

Innovations by the Faculty in Teaching and Learning		
Category of Innovation method: Activity Based Learning-Flipped Classroom		
A. Y. : 2024-25 (Odd Sem)	Class : BE Comp	Course: Big Data Analytics (CSC702)
Faculty Name: Prof.Vaishali Yeole		
Goals / objective of the method:		
<div> <div>1. Promote Active Learning</div> <div>2. Improve Understanding of concepts</div> <div>3. Maximize Classroom Time</div> <div>4. Foster Self-Paced Learning</div> </div>		
Topic covered: How Big Data is Revolutionizing the Healthcare Industry ?		
Description of method:		
A flipped classroom is an instructional approach where traditional learning methods are reversed. Instead of		
Benefits of the method:		
<ul style="list-style-type: none"> • Classroom time is spent solving problems, engaging in discussions, and working on real world applications. 		
For review and critique contact: Vaishali.Yeole@sigce.edu.in		
Review and Critique:		
Some students were not able to express/talk confidently although they were knowing answers. Remaining students used this method as an opportunity to understand, present and to build confidence about topic.		
Action taken based on review and critique:		
Students who had faced talking issue, were motivated and encouraged to talk and thus they also participated.		

Innovations by the Faculty in Teaching and Learning	
Category of Innovation method: Activity Based Learning- Brainstorming	
A. Y. : 2024-25 (Odd Sem) Class : BE Comp Course:NATURAL LANGUAGE PROCESSING(CSDC7013)	
Faculty Name: Prof Deepti Vijay Chandran	
Goals / objective of the method:	
1. Actively engage students	2. Promote critical thinking
3. Create a collaborative learning environment.	
Topic covered: Small language Model applications	
Description of method: Brainstorming session encourages students to analyze problems, think creatively, and explore multiple solutions. Students actively participate in generating ideas, which keeps them engaged and fosters a deeper understanding of the subject. It provides a platform for students to think freely and come up with innovative ideas without fear of being judged. Also, it promotes teamwork as students work together to share and refine ideas.	
Benefits of the method: Solving Skills • Engages Diverse Learners • Encourages Ownership of Learning • Encourages Collaboration	Fosters Problem-
For review and critique contact: dipti.chandran@sigce.edu.in	
Review and Critique:	
The brainstorming session brought a lot of unexplored concepts in SLM. It was concluded by request for a session to study the feasibility of all ideas.	
Action taken based on review and critique:	
Students were asked to explore SLM .	

Innovations by the Faculty in Teaching and Learning

Category of Innovation method: Activity Based Learning-Flipped Classroom

A. Y. : 2024-25 (Odd Sem)

Class : BE Comp

Course: Cyber Security and Laws(ILO7016)

Faculty Name: Prof. Jaspreet Kaur

Goals / objective of the method:

1. Promote Active Learning
2. Improve Understanding of concepts
3. Maximize Classroom Time
4. Foster Self-Paced Learning

Topic covered: Framing Techniques

Description of method:

A flipped classroom is an instructional approach where traditional learning methods are reversed. Instead of listening to lectures during class and doing assignments at home, students can learn new content at home through videos, readings, or interactive materials. They get engaged in interactive, hands-on activities during class to apply their knowledge, ask questions, and collaborate with peers. This method shifts the focus from passive to active learning.

Benefits of the method:

- Classroom time is spent solving problems, engaging in discussions, and working on real world applications.
- Group activities promote teamwork and communication skills.
- Teachers have more time to address individual student needs.

For review and critique contact: jaspreet.kaur@sigce.edu.in

Review and Critique:

Students were asked to read case studies of cyber criminals and how their offense differed from the country of residence to the country of crime conducted.

Action taken based on review and critique:

None