



# SREYAS Institute of Engineering & Technology

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### Innovations by the Faculty in Teaching and Learning

#### Innovative practices used by faculty in Teaching and Learning Process:

Sl.No	Innovation Method	Academic Year/sem	Year	Description
1	ICT method	2019-20 I sem	II,III and IV	Student can able to understand the concepts easily and record the session for future reference.
2	Google classrooms/Microsoft teams/Canvas/Zoom meetings/Cisco-webex	2019-20 II sem	II,III and IV	Online classes conducted to the students in Covid-19 pandemic situation using the online web channels for understand the concepts effectively and record the session.
3	Quiz Assessment:	2020-21 I sem	III	For assessing the students knowledge, conducted the online quiz by using the Google forms
4	Self Learning Encouragement in on-line learning mode(Edureka)	2020-21 I sem	II,III and IV	Acquire the online certificate programme for faculty members for up skilling their knowledge in teaching and learning process.

# 1. ICT method

## **Introduction:**

The role of the teacher is undergoing radical change - his expertise requires continuous training and coordination with students in the use and practical applications of Information and communication technology (ICT) in education. ICT in the educational process should serve as a learning method and not only as a tool. At the same time, it is important to realize that ICT does not replace traditional teaching methods, but complements them by encouraging curiosity, research and experimentation.

## **Prerequisite:**

- Various devices/technology in ICT includes:
- Access of course materials through remote devices,
- Online digital repositories for lectures, course materials, and digital library,
- Online/ Cloud based academic management systems,
- Employing the flipped classroom concept,
- Making use of handheld computers, tablet computers, audio players, projector devices etc.

## **Objectives:**

- Support functions: administrative, technical and supportive functions ,
- Learning assistance: assistance and support for learning and teaching,
- New learning: new teaching and learning methods, techniques and tools.

## **Outcomes:**

- Enhancing learning experiences and providing new sets of skills,
- Reaching more students with Massive Open Online Courses(MOOCs),
- Facilitating the training of faculties,
- Minimizing costs and saving time associated with information delivery and automating regular day-to-day tasks,
- Improving the administration of institutions to enhance the quality and efficiency of service delivery.

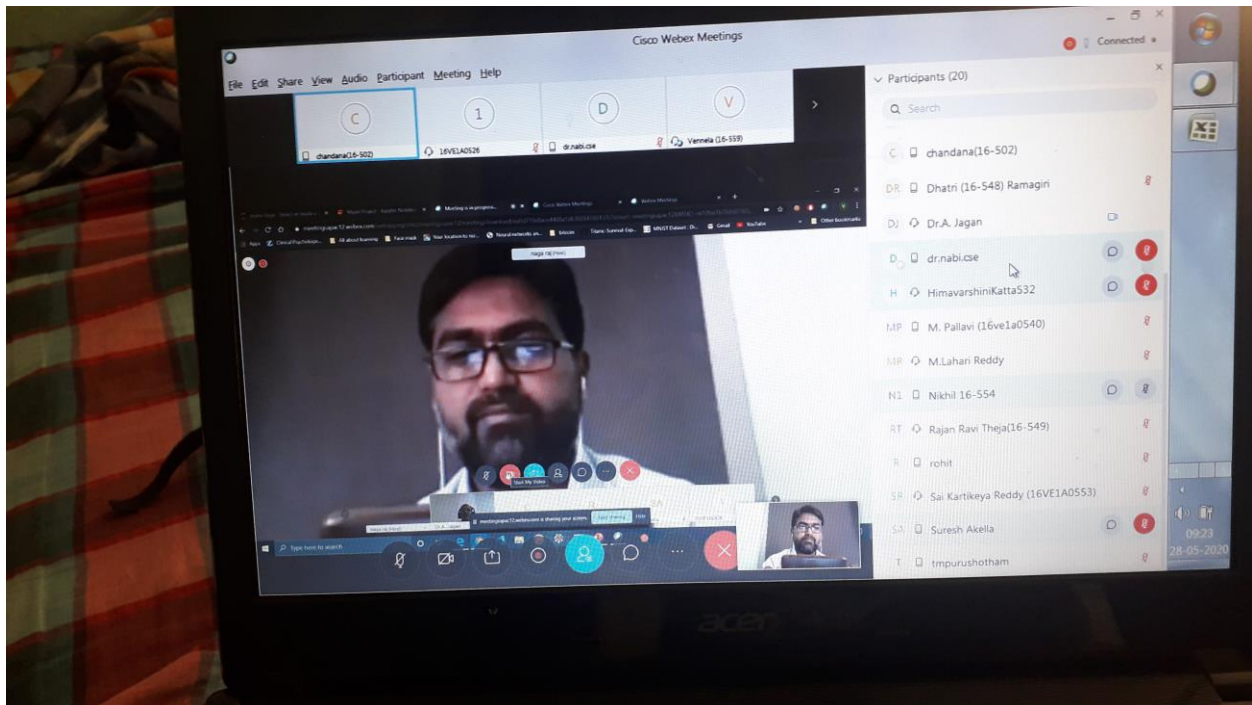
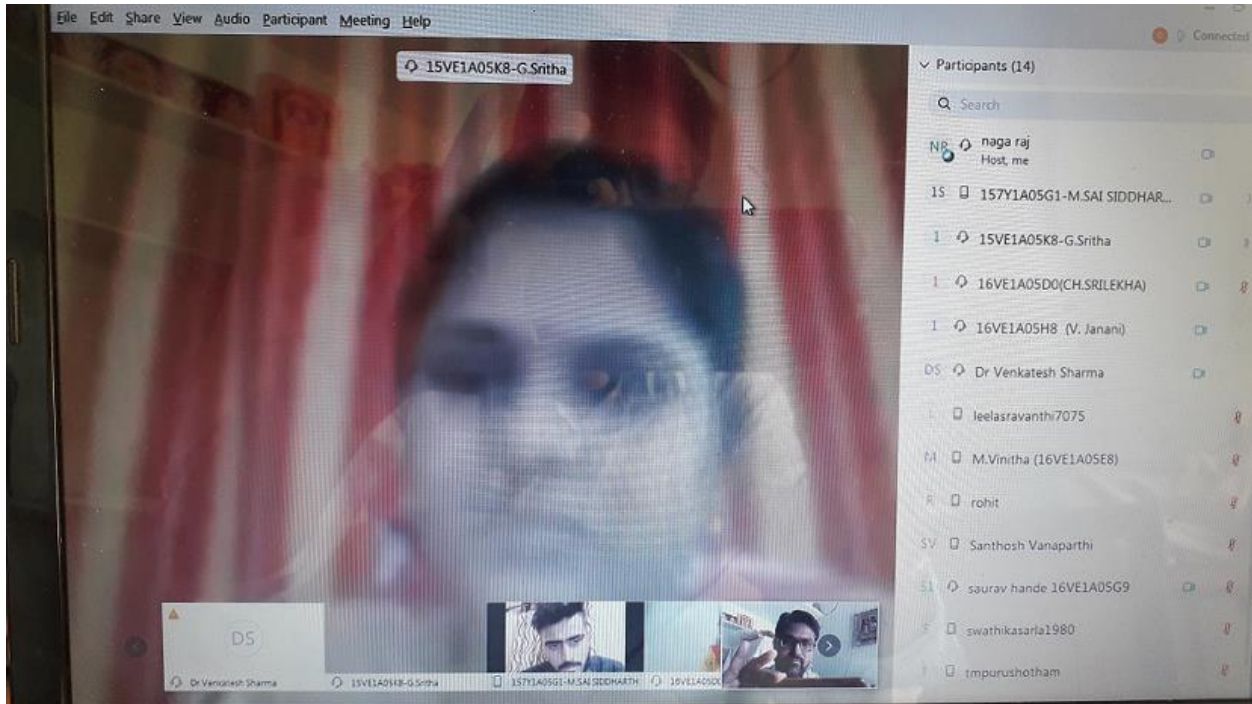
**Implementation: ICT Tools**

Sl.No	Name of the faculty	A.Y	Year	Subject	Outcome
1	Dr.M.Purushotham	2019-20 I sem	II	COA	Learn about computer system architecture and organization
2	Mrs.K.Navatha	2019-20 I sem	III	DAA	Learn about various algorithms and its complexity analysis
3	Mr.Santhosh ramachander	2019-20 II sem	IV	DM	Students able to learn classification/clustering techniques
4	Mrs.Padam Joshi	2019-20 II sem	II	Java Prog	Learn about navigation of java programming with ICT tools
5	Mr.Sravan kumar	2019-20 II sem	III	CD	Able to distinguish the phases of compilers
6	Salar Md.	2019/20 II sem	IV	MSE	Usage of ICT tools to encourage the learning of modern software engineering tools/applications

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## Participants:-



## **2. Google classrooms/Microsoft teams/Canvas/Zoom meetings/Cisco-webex:-**

In the Covid-19 Work-From-Home scenario, most of the educational institutes have adopted the online education mode. This mode is heavily dependent on E-Learning Tools and there are a lot of tools available in the market. What is the best combination of e-learning tools for example for the following activities:

- Learning Management (e.g. Moodle)
- Lecture Delivery (Microsoft Teams, Google Meets, Zoom, etc.)
- Video Editing and Compression
- Video Hosting, Streaming, and Downloading
- Assessments, Exams, etc.

As part of academics, Department of CSE has adopted online teaching tools like Microsoft teams, Zoom meetings, and Canvas Infrastructure. During the Covid-19 pandemic situations most of the faculty's are adopted the canvas infrastructure tool for online classroom teaching for 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> year students via online mode from their home.

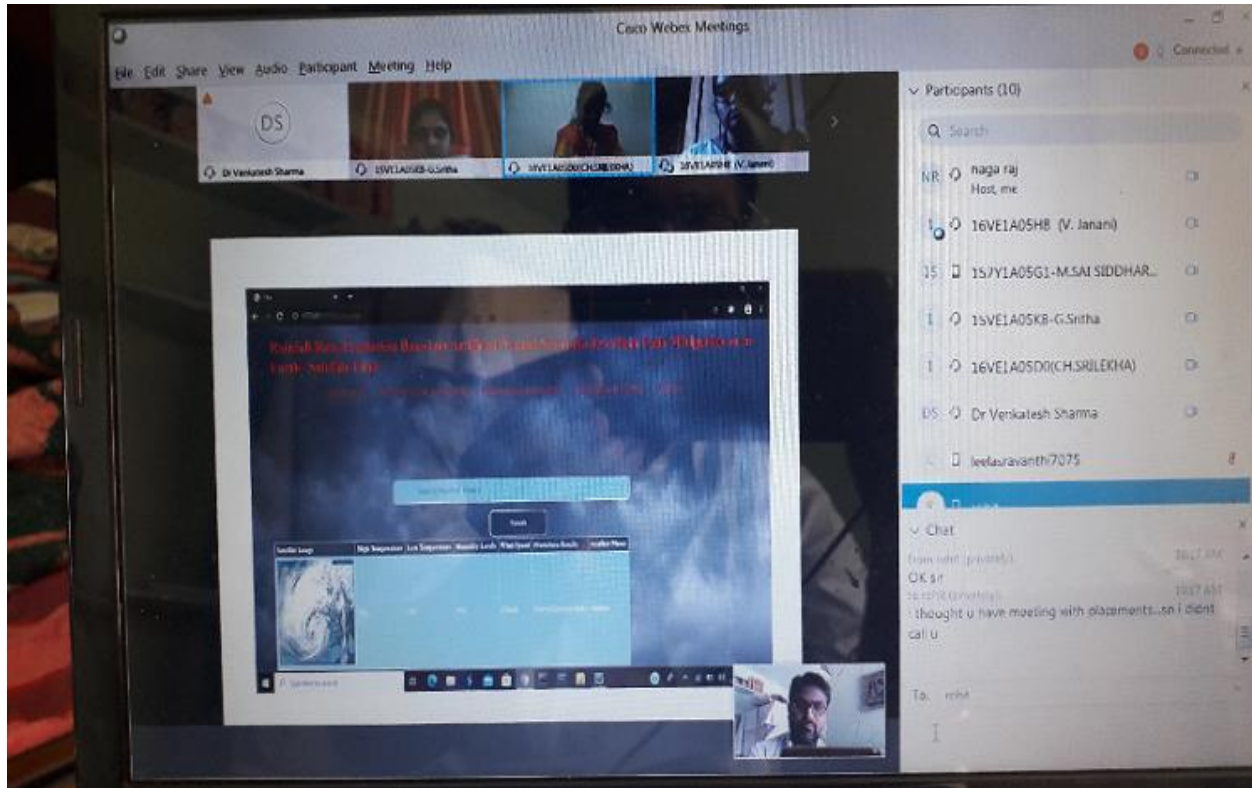
### **Outcomes:**

- Students able to learn the new concepts via online classrooms
- Able to record the sessions and listen it whenever required.
- Share the contents in the you-tube channel
- Improved the clarification of doubts in conversion manner by the students and faculty

### **Implementation:**

Department of CSE has implemented these online tools for conducting online classes effectively in Covind-19 pandemic period.

**Participants:-**



Implementation: Google classrooms/Microsoft teams/Canvas/Zoom meetings/Cisco-webex:-

Sl.No	Name of the faculty	A.Y	Year	Subject	Outcome
1	Mrs.K.Ramya Lakshmi	2020-21 I sem	IV	Python Program ming	Students able learn the emerging programming languages like python programming
2	Mrs.P.Archana	2020-21 I sem	IV	OOP through C++	Learn about object oriented programming using C++
3	Mrs.Meenakshi	2020-21 Isem	IV	Data Mining	Using weka tools analyze the data sets of various kinds using data mining techniques
4	Mrs.V.Swathi	2020-21 Isem	III	SE	Learn about unified modeling language for design the software blueprints.
5	Mrs.K.Ramya Lakshim	2019-20 II sem	II	DBMS	Learn about navigation of java programming with ICT tools
6	Mr.Santhosh ramachander	2019-20 II sem	III	WT	Students able to learn classification/clustering techniques
7	Mrs.Padma Joshi	2019-20 II sem	II	Java Prog	Lean about computer system architecture and organization
8	Mrs.P.Srilatha	2019-20 II sem	III	CRNS	Learn about various algorithms and its complexity analysis

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### **3. Quiz Assessment:**

Quizzes can be given without an instructor, Quizzes let students know where they're wrong as they provide instant results. This gives students a direction to the areas in which they ought to improve and form a strategy for the same. Students can begin to use their strategy as they encounter a problem using the same concept that they just missed, improve and then apply it during summative assessments

#### **Methodology:**

**Set timer:** The creator is able to set a timer for the whole quiz or to set a timer per question. This is possible to do with written quizzes, but is very time consuming for the instructor. Plus it's almost impossible to do with a huge amount of participants.

**Better overview:** It's possible to show one question at the time with online quizzes. People are not able to skip a question, because you will get a reminder that you can't leave the answer blank.

**Improve your brand:** There are several ways to gain more brand awareness: Generate new interactive sales opportunities, build your traffic to your online channels, improve time spent on site and improve the sharing on social media about your campaign and brand.

**Instant Response:** Students do not have to wonder if their answer is correct or not as they answer a question. Nor do they have to wait until the next class, which may be 24 hours or more away. Online quiz programs provide immediate feedback to their answers.

**Formative Assessment:** Using online quiz tools to deliver formative assessment can be a useful and crucial resource. Carrying formative assessments through online quizzes is a smart way to look into the areas that need to be paid heed to during training/learning.

**Assists in Memorizing:** Quizzes that include images and pictures help in memorizing the right answers. With quizzes, students associate an answer or any useful piece of information with any image or video incorporated in that answer. It works because students are visually pegging (or



“placing”) representations of what they want to remember in images or videos they can easily memorize and identify.

**Ample Attempts to Improve:** Students can retake a practice quiz as often as they want to improve their score. The program can be set to keep the highest score. If the practice quizzes are truly formative, then no grade will be given. Students will demonstrate their learning in class and on summative tests.

### **Outcomes:-**

- Students able to assess the knowledge install and trying to gain more knowledge on the subject.
- To acquire the more marks in objective type in internal examinations.
- Able to gain the depth knowledge of subject.

### **Advantages: Google forms**

It is a free online tool that allows you to collect information easily and efficiently. The interface is very easy to use. Any user with an average Internet knowledge can create forms using this tool. The assistant is simple to use. The What-You-See-Is-What-You-Get interface makes it easy to drag and drop form elements and organize them based on actions or events.

At the design level it is possible to choose between a palette of colors, as well as own images as a background. Google forms stores the feedback received so we can analyze it in detail.

The forms are integrated with Google spreadsheets therefore we can access to a spreadsheet view of the collected data. The general configuration of forms or surveys allows you to collect the recipient’s email address and limit the answers.

For advanced users, the type of data that can be inserted into a field can be customized using regular expressions. This helps customize the form even more.

A Google form allows us to see how the survey will look before sending it over to the recipients. We can send the form by email, integrate it into our website or send the link via social networks or any other means. With this tool, you can get unlimited questions and answers at no cost, while other survey tools require a payment depending on the number of questions and recipients.

**Implementation:**

<b>Sl. No</b>	<b>Name of the faculty</b>	<b>A.Y</b>	<b>Year</b>	<b>Subject</b>	<b>Outcome</b>
1	Dr.G.Suryanarayana	2020-21 I sem	III	Artificial Intelligence	Gain the importance of AI and its applications
2	Mr.Santhosh ramachander	2019-20 II sem	III	Web Technologies	Students able to gain the knowledge of data mining techniques

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#### 4. Self Learning Encouragement in on-line learning mode(Edureka)

- **Edureka:-**

Edureka is one of the online education marketplaces on the Internet. To create an alternate platform for students who wish to continue and complete courses by attending live online courses, using a team of ridiculously committed educators who will stop at nothing to impart education, helped by a 24 x 7 support system. By deploying world class team of industry experts and aim to educate learners with the skills they need to advance their professional life to the next level.

Apart from innovative teaching and learning, our faculties are registered in Edureka online courses and completed successfully with certifications. Based on their learning skills, we proposed a same kind of innovative method to share the knowledge of new courses to our students.

##### **Objectives**

- To provides a online learning platform with certification program
- Interactive innovative online discussion forum with expert from the industry
- To gained the knowledge of emerging technologies from computer science and engineering
- To encourage the faculty and students to learn the new technologies with practical experiments.

**Implementation:** The implementation of this innovative method to teach the students by the faculty who acquired the certification from the edureka online academy.

##### **Outcome**

- To improve the skills by the students for their placements
- More practical knowledge gained by the students in latest technologies
- Useful for academic progress of the students.

The following list of faculty's who acquired the certification and given the lecture delivery of emerging courses/ technologies in computer science and engineering.

<b>Sl. No</b>	<b>Name of the faculty</b>	<b>Name of the course</b>	<b>Year</b>	<b>Signature</b>	<b>Remarks</b>
1	Mr.K.Rohit Kumar	Fundamentals of Block chain Technologies	2019		

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