

NANDHA ENGINEERING COLLEGE

(AUTONOMOUS)

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

ERODE - 638 052 TAMILNADU

Email: principal@nandhaengg.org Mobile: 73737 12234

9

Problem Solving Methodology

NANDHA ENGINEERING COLLEGE, ERODE-52 (AUTONOMOUS)

DEPARTMENT OF INFORMATION TECHNOLOGYY

PROBLEM SOLVING AIDS	FACULTY NAME
Google Class Room	All Faculty members
Online Platform: Moodle	M.N.Shrigowtham
GUVI Geek Network Private Ltd	S.Anbukkarasi
Online Test Tool : Edmodo	All Faculty Members
Online Tool : Schoology	All Faculty Members
	Google Class Room Online Platform: Moodle GUVI Geek Network Private Ltd Online Test Tool: Edmodo

a. Edmodo:

Web Link: https://new.edmodo.com/groups/15cs701-principles-of-cloud-computing-304393390

- The Edmodo network enables faculty to share content, distribute quizzes, assignments and manage communication with students.
- Edmodo is free to use.
- Faculty creates classes with their subject code or name.
- Faculty posts their questions in the Edmodo for assessment of online questions.
- 1. Posting the teaching materials to facilitate flipped classroom mode.



Teaching materials in Edmodo

CHEERING COLUMN TO THE PRODE-52 PRODE-5

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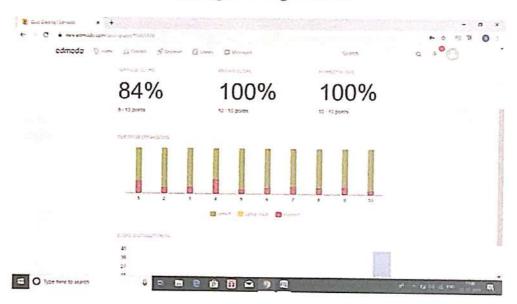
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2. Posting the time-bound quiz and assignments and manage all the submissions digitally .



Online Quiz through Edmodo



Quiz progress in Edmodo

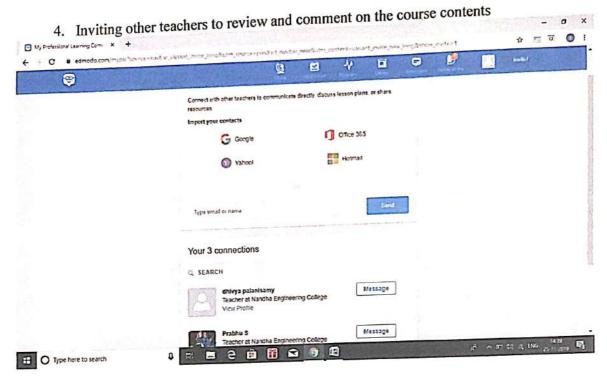
3. Evaluation of the students' work is quick



Evaluation page in Edmodo



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Course content feedback from other teachers

 Encouraging students to ask questions privately and also react to sensitive comments posted during assessments

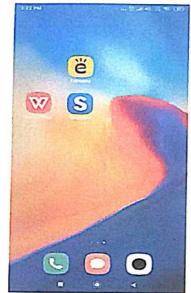


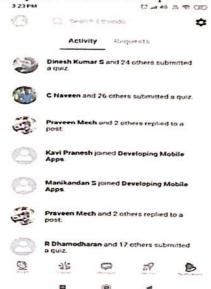
students' Forum in Edmodo



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6. Students can learn and work from anywhere and anytime. And Faculty members can also view the students' work from anywhere and anytime with their hand phones.





Edmodo Mobile App Version

b. Moodle

Web Link: http://172.16.20.251/practice

Moodle is a learning platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalized learning environments.



Moodle Quiz Report

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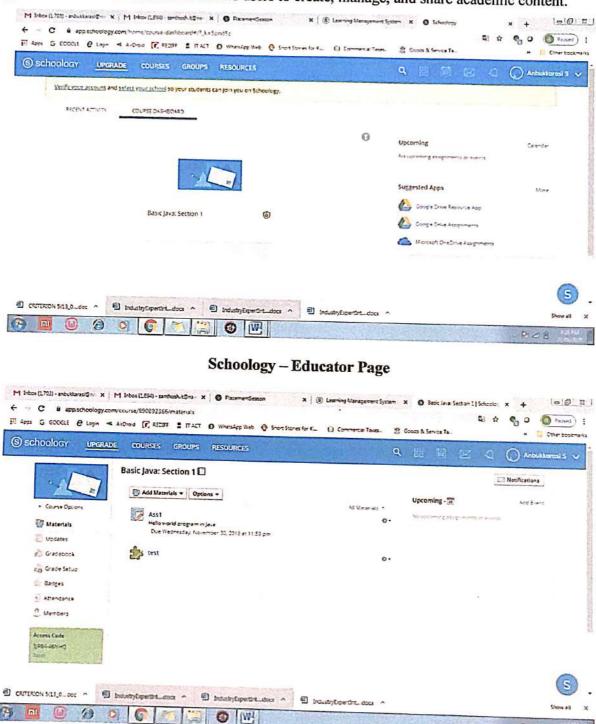
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c) Schoology

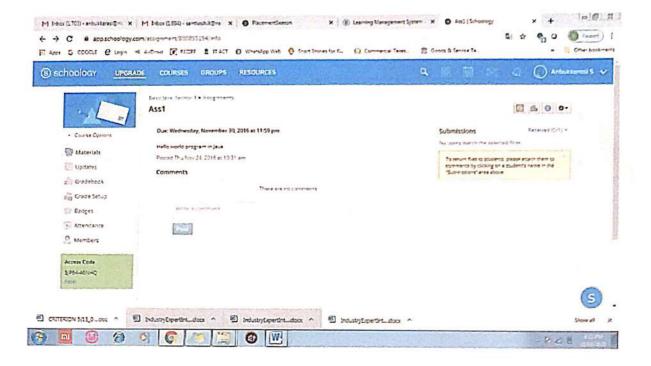
Schoology is a social networking service and virtual learning environment for K-12 school and higher education institutions that allows users to create, manage, and share academic content.



Schoology - Content Page



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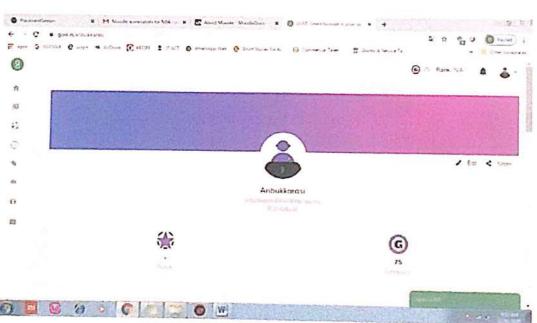


Schoology - Assignment Post

d. GUVI

Web Link: http://www.guvi.in/codingchallenge

Learn and Practice Programming with courses created by industry experts. We motivated our students to register courses depends upon their interest and practice code kata level of questions to improve their programming skill.

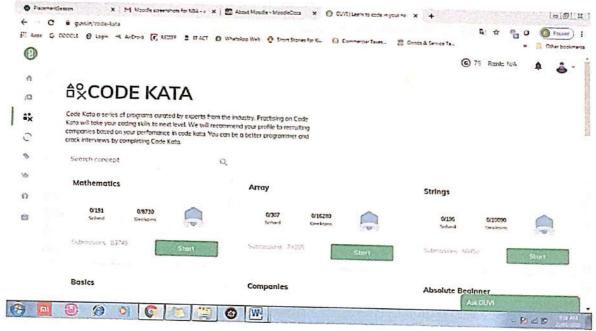


GUVI- User Profile

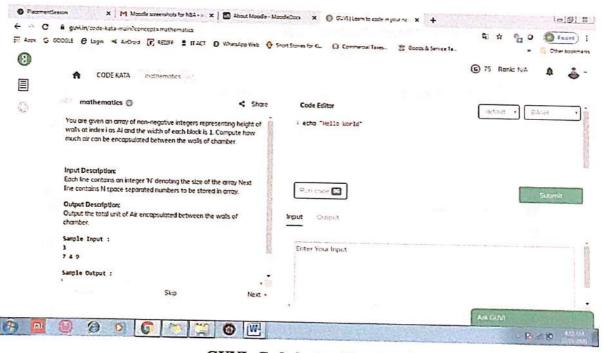
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GUVI- Code kata



GUVI- Code kata - Question Page

e. Innovations in instructional delivery and methods:

- Along with chalk and talk the faculty members teaching analytical and theoretical subjects like Data Mining, Software Testing, Design and Analysis of Algorithm etc.
- Faculty members prepared working models which can be carried into classroom and demonstrate the working in an effective manner to the students
- Concept oriented activities are planned in the classroom with the participation of the students



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Case Study:

 Students are given a case study to conduct the investigation. Reports are made to generate by the students after investigation.

Faculty: J. Sakunthala / Assistant Professor

Subject: 17ITC10 / Object Oriented Analysis and Design

: Fifth Semester Sem Class : Third Year

Demonstration through Working Models:

The students of second year were taken to IT Lab to explain about the principles of Computer Hardware.

Faculty: Ms. G. Suganya/ Assistant Professor

Subject: 17ITP03/ Operating System Principles Lab

Sem : Fourth Semester Class: Second Year

Project Lab:

The Project Laboratory offers the students, the opportunity to gain valuable hands-on experience with state-of-the-art environment where students become proficient in both the physical and creative skills needed in the field of Information Technology.

• The Project Laboratory has a key role in promoting practical learning experience, a place where they develop creative proposals, and execute their final projects.

The main purpose of Project Laboratory is to provide an environment for student for developing their Project based learning (PBL) subjects and Final year main projects.

The space is equipped with a spacious classroom with LED Projector.

Faculty

: Mr. C. Santhosh

Designation Department

: Assistant Professor : Information Technology

Classes

: To all types of public and private gatherings.



Interaction with the first year Students on the title of "Future Trends of Information Technology"



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Preparation of Projects for Innovation Day/ NEC at Project Lab



Participation in PALS event

The activities involved in project lab are

- To prepare students to develop live projects on their own.
- Preparing their project design using Rational Rose software.

Classroom quiz sessions:

- These help in creating interest by breaking monotony of regular classes while enhancing the learning experience.
- · Concepts are shared by interaction among their peers.

Webinar:

Web-based seminar is a presentation, lecture, workshop or seminar that is transmitted over the Web
using video conferencing software.



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- A webinar is a form of one-to-many communication: a presenter can reach a large and specific group of online viewers from a single location. Providing it is used effectively, interaction during a webinar can be very powerful.
- In view of the large number of participants, smart tools are essential to channel that interaction.

Hence, a webinar offers various interactive opportunities:

· Ask a question, Chat, Survey and Test

Spoken tutorial:

Spoken tutorial help students to improve communication skills.

Student presentations:

• In many relevant subjects, students deliver presentations to the rest of their classmates. This significantly boosts student's confidence and their learning experience.

Student Seminars:

- The overall objective of this activity is to motivate students for self Study and Group Study.
- The best practices enhance the listening ability.
- · Students learn to deal with conflicting opinions.
- · Presentation improves and gain self-confidence.

Small Group Learning:

 Recent calls for instructional innovation in undergraduate education have led to lot of logical research.

Its analysis demonstrates the following benefits of small-group learning

- · Effective in promoting greater academic understanding
- · More favorable attitudes towards learning
- Increased persistence through core courses and programs

Project Based Learning:

- Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge
- Self-evaluation gives students a sense of accomplishment and further instils responsibility for learning.



The Seven Steps -Project Based Learning



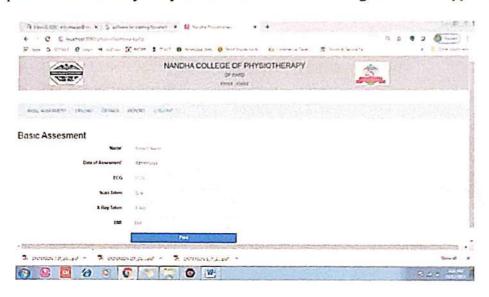
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Sample Project: Physio Management System

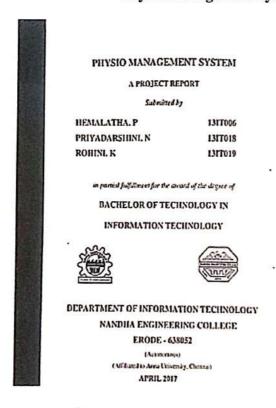
Project Students:

Hemalatha P (13IT006) Priyadharshini N (13IT018) Rohini K(13IT19)

This project aims to develop online management system for Physiotherapy hospital where
patient details and day today activities are automated through web based application.



Physio Management System





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In-plant training:

- · An in-plant training (IPT) is a short duration training course provided in any company. Inplant training provides the industrial exposure to the students how to face the industry once they foot out from the campus.
- The industrial knowledge is essential for all students to get success in their job. On successful completion of in-plant training students will be skilled enough and ready to shine.

Steps involved:

- Identification of reputed industries
- Getting permission by submitting student bonafide certificate
- Student undergoing IPT
- IPT presentation and certificate submission in front of peer committee

)); ABILE TECHNOLOGIE	S
	ate of Training
T	his is to certify that
Mr/Ms	S. Dhanasekar
has attended and succe	essfully completed the Inplant Training
	during the period
D 26.06	
Pine Some Colmbato	Abile Technologies by of Completion Certificate



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DEPARTMENT OF MECHANICAL ENGINEERING

S.No	PROBLEM SOLVING AIDS	FACULTY NAME
1.	Google class room	All faculty members
	Youtube video	Mr.M.Sengottaiyan
2.		Mr.B.Sakthivel
		Mr.T.Venkateshan
3.	Learning by doing	Dr.M.Easwaramoorthi
		Mr.S.Muruganantham
4.	Teaching through industrial practices	Mr.M.Shanmugam
5.	Waste craft	Mr.V.Chandramohan
		Mr.M.A.Omprakas
6.	Online test tool : Edmodo	Mr.S.Eswaran
_	Lecture notes using NPTEL videos	Dr.M.Easwaramoorthi
7.		Mr.M.Sengottaiyan
0	3. Physical models	Mr.M.A.Omprakas
0.		Mr.D.Ravichandran
9.	Cut section models	Mr.S.Balakrishnan
		Mr.M.Shanmugam
		Mr.Rajkumar
10.	Project based learning	Mr.V.N.Loganathan
		Mr.V.Chandramohan
		Mr.T.Venkateshan
		Mr.B.Sakthivel
		Mr.M.Mohamed Ajmal Mahasin

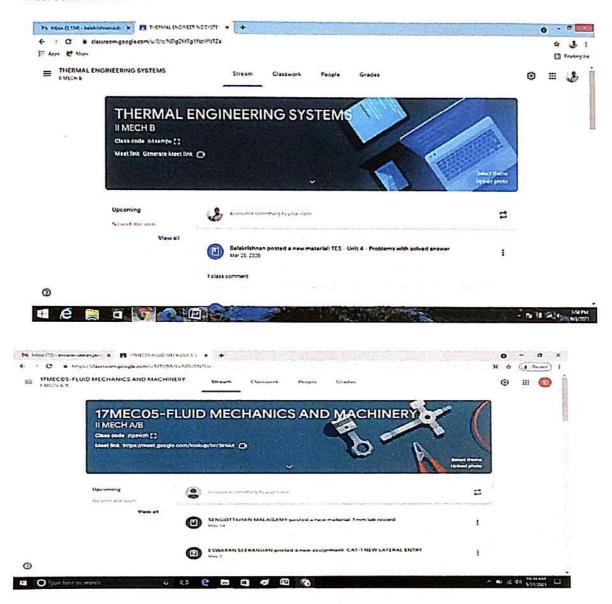
a. Google class room:

The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students and conducting classes by inviting students to join the class through a private code. Teachers can create assignments, quiz assignment, questions, topic wise course material,

EERING CONTROL TO LEGO CONTROL

Dr.N.Rengarejan, B.Sc., B.Tech., M.E., Ph.D.,
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(Autonomous) ERODE - 638 052. evaluate and assign marks within the Google Class room. Students can see their marks on the Google classroom and share their comments.



Sample Google class room

b. Youtube video:

The main aim of using youtube video is to make the students to learn visually, allows students to see physically what is being taught and helps them to understand the concepts clearly. Further, it has provision for open conversation and discussion through chat box. The students will have easy access to the source of learning anytime that they want and that too it is free.

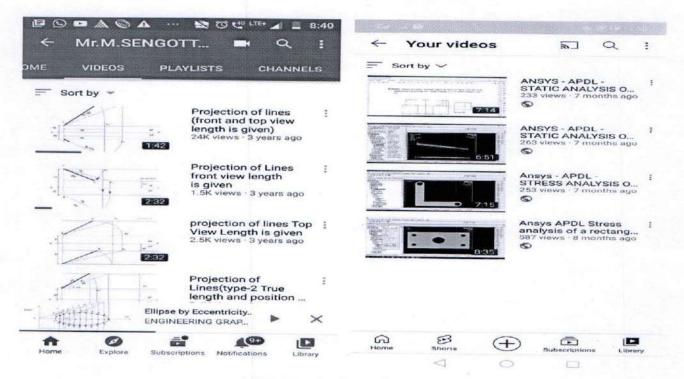
Sample youtube video link: https://youtu.be/4ECHmnTtzmM

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https://youtube.com/user/sakthivelme1990



Youtube - Sample video

c. Learning by doing

To have an interesting session inside the class room apart from the regular academic activities, we have included learning by doing practice using chart paper and create models. It gives students a feel of real experiential learning and effective engagement in the classroom. We have implemented this method in our classes to increase the learning competence of the student to think and create it.





Engineering Graphics - Model development



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Model development by students

d. Teaching through industrial practices

Industry persons are used to engage students when they come for assessment of laboratory classes. They analyze the student's performance, provide feedback to the students and mentor them about the application of lab experiment. A view of students interaction with industry expert is presented below.



Teaching through industrial practices - Teaching page



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e. Waste craft

Students are encouraged to fabricate models using waste materials in order to improve their learning and creativity. A glimpse of table fabricated using chain, bolts, nuts, etc., is shown below. This practice helps student to think out of box.

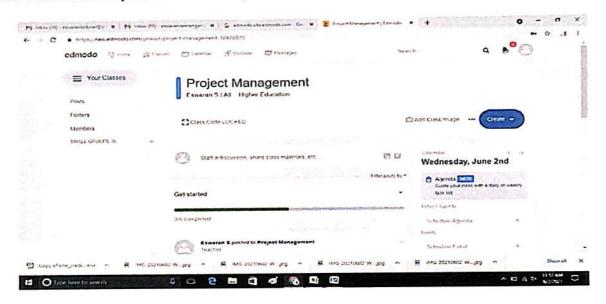




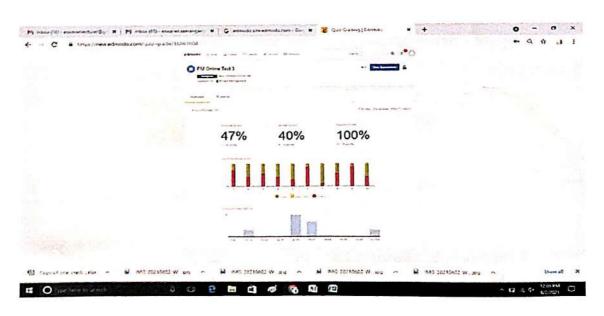
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f. Edmodo

The Edmodo network enables faculty to share content, distribute quizzes, assignments and manage communication with students. It is free to use. Faculty creates classes with their subject code or name. Faculty posts their questions in the Edmodo for assessment of online questions. After assigning the question, class code will be shared to students by which student can enroll and take test. This platform has many features that allow students to access class information quickly and teachers can respond online instantly.



Edmodo page

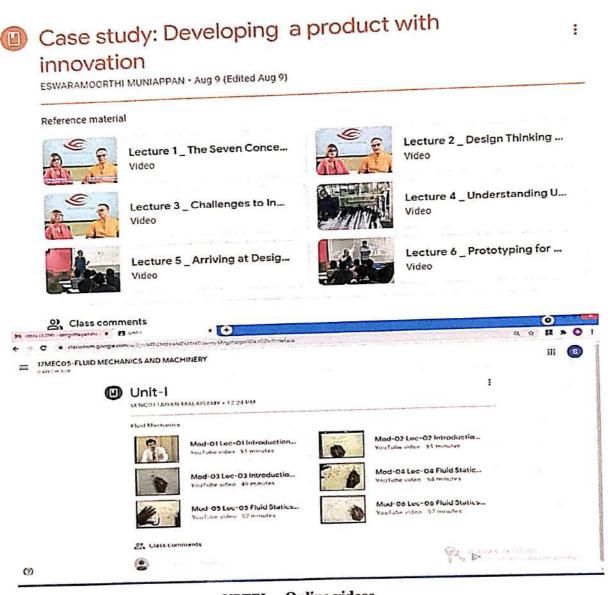


Result view page



Development of lecture notes using NPTEL videos

Faculty members do online courses periodically on Swayam platform and use the suitable videos for preparing their course materials. This course material is shared among students for better learning. While using videos as part of regular course, students get opportunity to listen experts lecture and understand the concepts easily.

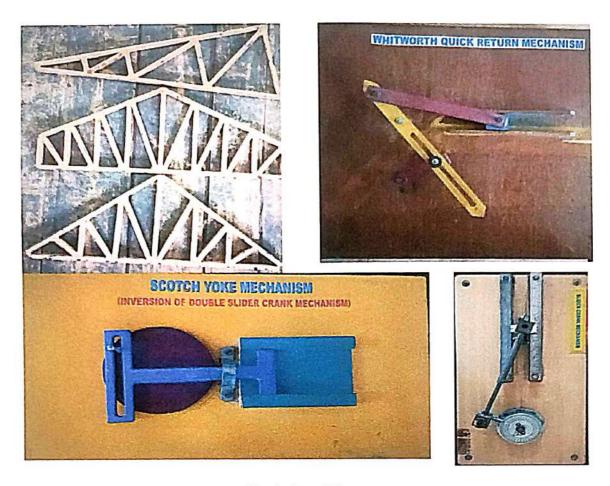


NPTEL - Online videos

h. Physical models

Physical models are most effective way of enhancing learning when students are exposed to the models during the lecture. Physical models of complex mechanism are used to increase the understanding levels of students. .



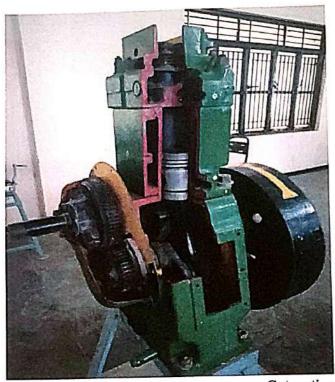


Physical models

i. Cut section models

Sections of almost all parts of the engine are taken so as to display internal working parts for easy Industry experts are engaged as Adjunct faculty to teach specialized topics in the courses. understanding. Different working systems are coloured to make learning easier. The engine working can be explained effectively by rotating it at a lower speed using an electric motor or by manual. Students can see the components closer, touch and feel it. It will help them to have clear cut thinking about it.







Cut section models

j. Project Based Learning (PBL)

Project Based Learning is a teaching method in which students' gains knowledge and skills by doing project as part of their course. This method of teaching inculcates planning, critical thinking, reasoning and creativity. Experience gained during the PBL gives students a sense of accomplishment and further instills responsibility towards learning.

Sample Project : Automatic bottle filling system

Project Students: Naveen C (16ME075)

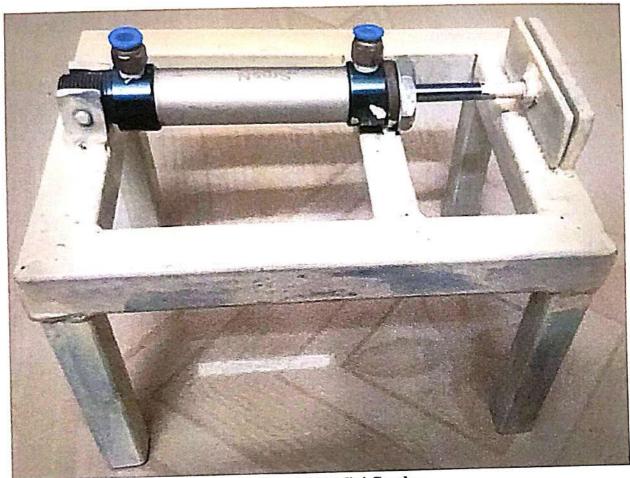
Praveen.R (16ME098) Jeevanantham M (16MEL09)



Automatic bottle filling system



Sample Project : Pneumatic Mini Crusher Project Student : M.Manikandan (17ME068)



Pneumatic Mini Crusher

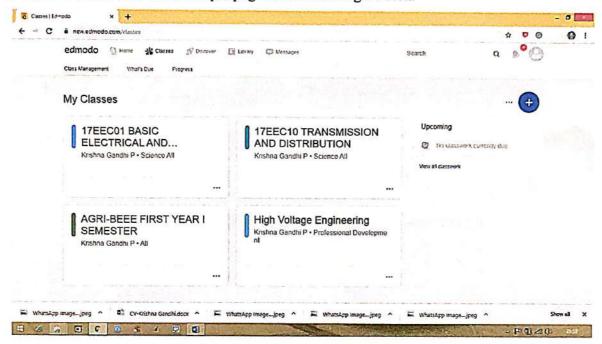


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Edmodo:

Using Edmodo, students and teachers can reach out to one another and connect by sharing ideas, problems, and helpful tips. All the faculty members of the Department of Electrical and Electronics Engineering are using Edmodo to conduct online tests and a sample page is shown in Figure 5.6.a

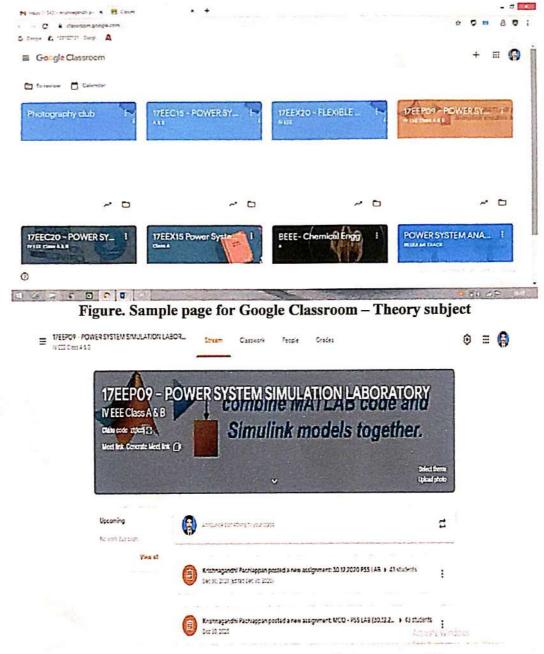


Sample Page for Edmodo

Google classroom:

Google Classroom is created by the subject handling faculty for all courses. Head of the department, Academic Coordinator and the Exam Cell coordinator are added as teachers for monitoring and conducting CAT exams. All the students are asked to join the Google Classroom through code shared to them. Syllabus, Reference materials, Notes, Homework problems, Assignments and Online Tests are posted in the Google Classrooms. The students are asked to submit their works through the same platform which helps to enhance paperless documents improving the welfare of the environment. Assignments and Online tests are assessed through Google Classroom itself and posted to students. This links all the Google facilities (Gmail, Drive, Docs, Forms, Sheets, etc) which enable ease of communication among the students and the faculty members. Continuous Assessment Tests are conducted through Google Forms scheduled through Google Classrooms. As per the guidelines from Anna University, End semester lab exams for II, III and IV year students for 2020-21 odd semester is conducted through Google Classroom and Google meet.



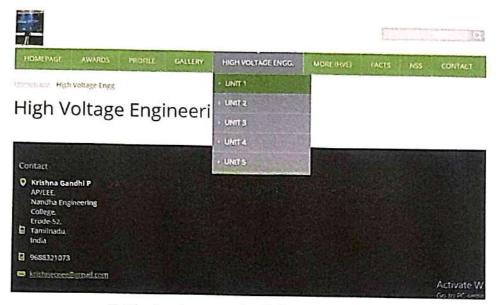


Sample page for Google Classroom - Laboratory subject

Website:

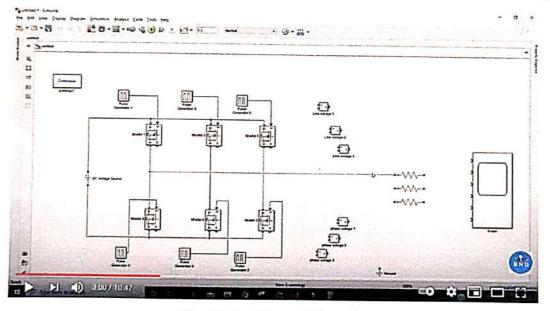
- Faculty member created a website and uploaded their technical notes to share the knowledge among the students.
- Website details: Faculty Name: Mr.P.Krishnagandhi, AP/EEE Subjects: High voltage engineering,
 Flexible AC Transmission Systems (FACTS).
- Website link: www.krishnal.webnode.com





Subject notes are uploaded to own website

YOUTUBE CHANNEL:



You Tube Channel Sample

• Link: https://www.youtube.com/watch?v=k77PV1kzm6g&t=6s



NANDHA ENGINEERING COLLEGE, ERODE-52

(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

S.No	PROBLEM SOLVING AIDS	FACULTY NAME
1.	Google Class Room	All Faculties
2.	Youtube video	Ms.S.Maheswari Dr.S.Prabhu
3.	JIGSAW Method	Dr.S.Prabhu Ms.B.Deepa
4.	Online Platform: Placement Season	Mr.V.Yuvaraj Mr.C.Balasubramaniam Mr.V.Manimaran Ms.S.Hemalatha
5.	GUVI Geek Network Private Ltd	Dr.D.Vanathi
6.	Ball game Activity	Mr.S.Prabhu
7.	Blog - Data Science	Mr.V.Manimaran
8.	Waste Craft	All Faculty Members
9.	Online Test Tool : Edmodo	All Faculty Members
10.	Online Test Tool : Testyou.in	Mr.S.Prabhu
11.	NPTEL - Mentor for Courses	Mr.V.Manimaran

a. Google Class Room:

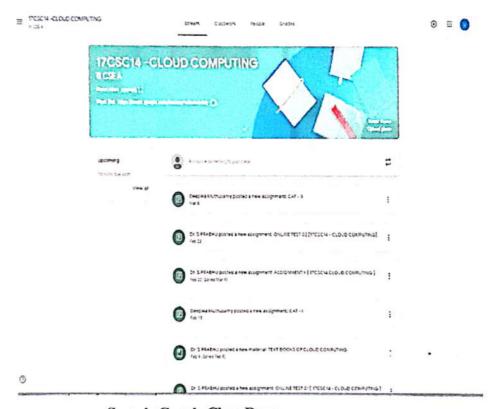
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The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and students. Students can be invited to join a class through a private code. Teachers can create, distribute, evaluate and assign marks within the Google Class room.

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Sample Google Class Room



Sample Google Class Room

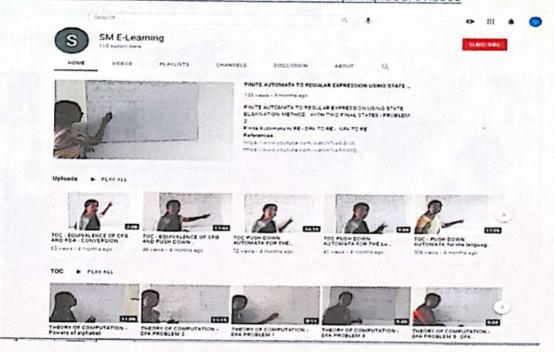
b. Youtube Video:

It provides various teaching videos and helps the students learn. It doesn't matter whether they are sitting in another part of the world. The students will have easy access to the source of learning anytime that they want and that too it is free.

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Sample youtube video link

https://www.youtube.com/channel/UCMOXbLyDoiKbpxhAcxYaVxQ?sub_confirmation=1 https://www.youtube.com/channel/UC8939G179iNWWpsknqxS6SA/videos



Sample youtube video



Sample youtube video



c. JIGSAW Method:

The jigsaw technique is a method of organizing classroom activity that makes students dependent on each other to succeed. It breaks classes into groups and breaks assignments into pieces that the group assembles to complete the (jigsaw) puzzle.



JIGSAW Method of Teaching



JIGSAW Method of Teaching



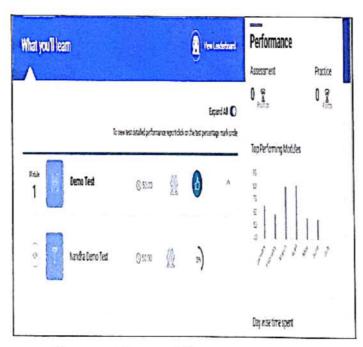
d. Placement Season:

Website: https://app.placementseason.com/module/session

As a part of placement preparation, we have been using the URL https://app.placementseason.com/module/session at our institution for both faculty members and students.

Placement season is a platform particularly known for online coding challenge that has been taken up by passionate pre-final year and final year students who aspires to get placed with high paying jobs. Placement season guides the students to expose to different coding languages by which students are able to prepare for the international and national level coding contents such as hackathon, codeathon and reputed company placements.

Placement season provides the students various categories to learn and take the tests such as company based tests, course related tests. It also enables the students to clarify their doubts by means of Webinar, Blog, Discussion Forum and Telegram Groups.



Placement Season- My course page



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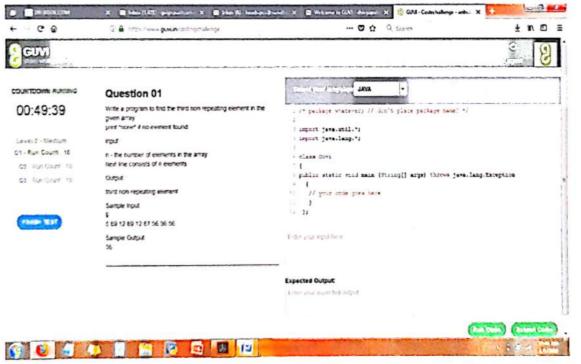
e. GUVI

Web Link: http://www.guvi.in/codingchallenge

Learn and Practice Programming with courses created by industry experts. We motivated our students to register courses depends upon their interest and practice code kata level of questions to improve their programming skill.



GUVI-User Profile



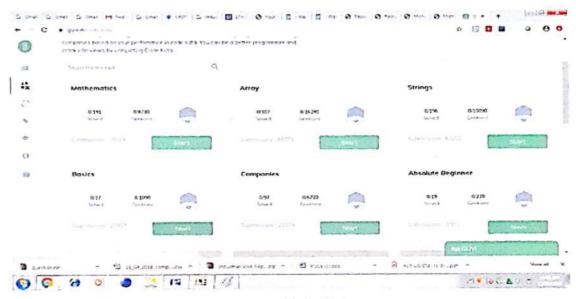
GUVI- Question Page



e.1. Code Kata

Web Link: http://www.guvi.in/code-kata

Code Kata a series of programs curated by experts from the industry. Practising on Code Kata will take the coding skills to next level. GUVI itself forward profiles to recruiting companies based on the performance in code kata. Students can be a better programmer and crack interviews by completing Code Kata.



Code Kata

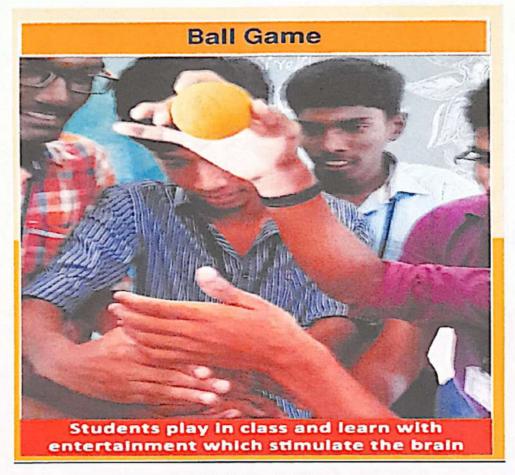
f. Ball Game Activity

- . To know the time and space complexity, we are using this activity with real time examples.
- Ball game activity is used for learning the subjects like Design and Analysis of Algorithm, Theory
 of Computation and Data Sctructures.

Usuage:

- · Team consists of 6 to 7 Members.
- The ball has to touch all the hands either in the palm or in fingers and ball should be land down.
- · The minimum time and space complexity has to be calculated.





Ball Game Activity

g. Blog - Data Science

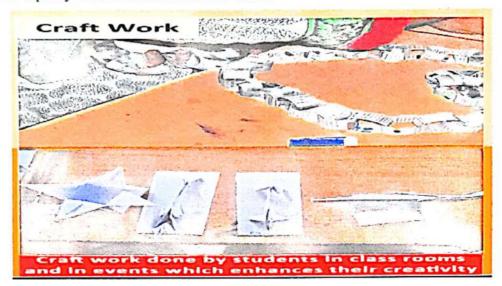
Web Link: vmanimaran1990.blogspot.com

A blog titled TECHIEZ TALKS has been created for the students to learn more information about data science. This blog includes videos, PPTs and other content related to the respective subject. This would help the students to gain more knowledge in and out of academic perspective. This acts as a platform where student can collect all the necessary information together about data science concepts instead of referring various web pages. On the whole, it will help the students to think out of academic syllabus by spending less amount of time



h. Waste Craft

To have an interesting session inside the class room apart from the regular academic activities, we have included innovation in waste materials. We have implemented this concept in our class rooms to increase the capacity of the student to think out of box.



Waste Craft

i. Edmodo

Web Link: https://new.edmodo.com/groups/15cs701-principles-of-cloud-computing-304393390

- The Edmodo network enables faculty to share content, distribute quizzes, assignments and manage communication with students.
- · Edmodo is free to use.
- · Faculty creates classes with their subject code or name.
- Faculty posts their questions in the Edmodo for assessment of online questions.
- After assigning the question, class code will be shared to students by which student can enroll
 the test and they can take test.



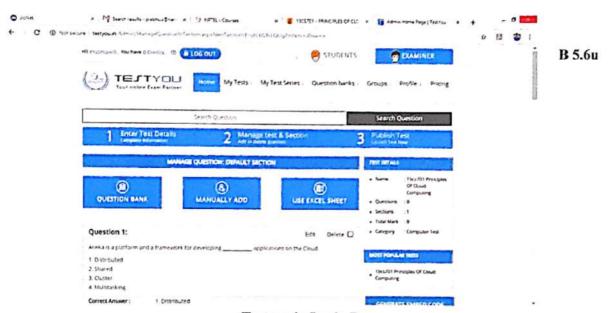
Edmodo Page



j. Testyou.in

Web Link: http://testyou.in/admin/managequestionsection.aspx

- A site for educators, Testyou.in allows them to create and administer tests in a fast and reliable way.
- This platform is to create tests using an interface that is intuitive before anything else, and that
 is hosted 100 % online.
- No need to install anything on your own computer.
- Students can take any test related to their fields if the questions are posted by any examiner.
- Question can be uploaded in the Excel format or manually questions can be added..



Testyou.in Login Page

k. NPTEL - Mentor for Courses

Web Link: http://Onlinecourses.nptel.ac.in/noc19 cs40/student/mentee

Any faculty member of a college can be the mentor for a maximum of 2 courses - one mentor for every 50 to 60 students. It is mandatory that the mentor be enrolled to the course which he/She is mentoring. Mentor will be recognized with certificates and recognition on the portal depending on the performance of the students he/she mentored.

Mentor Tasks

The mentor can do the following in order to improve the performance of the students.



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Eroae - 638 052.

- Select the courses appropriate for the students of that college based on the academic skill of the student.
- Help the student understand the gaps/finer points in lectures. If the course is being rerun, contents will be available ahead and student is at an advantage to begin learning much ahead of the course start.
- Ensure that the students watch the lectures and submit the assignments.
- Ensure that students work out the assignments themselves which will give them the confidence and also assess their understanding
- Give hints to solve the questions but not the complete solutions to the students. Not
 understanding how to solve will be detrimental as a part of the final exams is modeled on the
 assignments.
- Ensure that the assignments are submitted well ahead of the due date.
- Encourage students to ask questions in the forum no question is trivial or foolish. The forum
 is anonymous and gives students direct access to the faculty to clarify all the doubts they may
 have. Asking questions will also help other students who are shy of asking understand the
 content better.
- Help the students with their questions in case of problems with language and communication.
- Also keep the NPTEL office updated about the progress of the course and report any
 irregularities with respect to posting of content or forum questions not being unanswered.

Good practices for Mentors

The mentor can guide and improve the performance of the students by doing following practices.

- Be active in the Discussion forum; encourage students to do so too
- Conduct Mock tests
- Have group discussions
- Watch select video lessons along with the students
- · Motivate students to take notes while watching videos. This will help while preparing for exam
- · Watch the beginning videos and give crash course to the students on the topic
- Make a repository of all the online lectures, which students could copy and then review them time to time, especially before their Final Exam
- Arrange for group studying

Mentorship Certificate

Mentorship certificate is an incentive provided for the support and facilitation of the mentor. The following criteria will be used for providing mentorship certificate

- A mentor has submitted sufficient number of mentorship feedback(s).
- A mentor has scored more than 10 mentorship points in a course.
- · At least 1 mentee obtained a certificate.



NPTEL - Mentee Details

I.Innovations in instructional delivery and methods

Project Based Learning:

- Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge
- Self-evaluation gives students a sense of accomplishment and further instils responsibility for learning.

Sample Project: Manmade pollution

Project Students:

Nishanth Rajan.E.A (17CS069), Sabarinath.R (17CS084) and Nithish.S(17CS070)



Manmade pollution main page



MAN MADE POLLUTION

PBL REPORT

17CSC12 GRAPHICS AND MULTIMEDIA

Submitted by

NISHANTH RAJAN E.A.

(17CS069)

SABARINATHER

(17CS084)

NUTURE

(17CS070)

in

partial fulfilment for the award of the degree

of

BACHELOR OF ENGINEERING IN COMPUTER SCIENCE AND ENGINEERING





DEPARTMENT OF COMPUTER SCIENCE
AND ENGINEERING
NANDHA ENGINEERING COLLEGE, ERODE

(Autonomous)

(Affiliated to Anna University, Chennai)

OCTOBER-2019

Sample Project Report



Dr.N.Rengarajan, 8.Sc., 8.Tech., M.E., Ph.D.,
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NANDHA ENGINEERING COLLEGE
(Autonomous)
ERODE - 638 052

NANDHA ENGINEERING COLLEGE, ERODE-52 (AUTONOMOUS)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Contributions to teaching and learning are activities that contribute to the improvement of student learning. Many of such innovative initiatives taken by faculty and staff of the department can be observed in the Course Files, Laboratory Manuals and other documents that are maintained in the department. Any contributions to teaching and learning should satisfy the following criteria:

- a) Innovations in use of Information and Communication Technologies (ICT)
- b) Innovations in instructional delivery and methods
- c) Innovations in Assessment
- d) Innovations in Evaluation
- a) Innovations in use of Information and Communication Technologies (ICT): Every classroom is provided with LED projector. The faculty member can use black board, LED projector judiciously during the lecture delivery.

Audio-visual learning:

- In many subjects (wherever necessary) audio-visual aids are used.
- It is a proved fact that audio-visual presentations in the classrooms are more effective in capturing the attention of students.

NPTEL Videos:

NPTEL provides E-learning through online Web and Video courses in various streams.

Edmodo:

- Using Edmodo, students and teachers can reach out to one another and connect by sharing ideas, problems, and helpful tips.
- All the faculty members of the Department of Electronics and Communication Engineering are using Edmodo to conduct online tests and a sample page is shown in Figure.





Google classroom:

Google Classroom is created by the subject handling faculty for all courses. Head of the department, Academic Coordinator and the Exam Cell coordinator are added as teachers for monitoring and conducting CAT exams. All the students are asked to join the Google Classroom through code shared to them. Syllabus, Reference materials, Notes, Homework problems, Assignments and Online Tests are posted in the Google Classrooms. The students are asked to submit their works through the same platform which helps to enhance paperless documents improving the welfare of the environment. Assignments and Online tests are assessed through Google Classroom itself and posted to students. This links all the Google facilities (Gmail, Drive, Docs, Forms, Sheets, etc) which enable ease of communication among the students and the faculty members. Continuous Assessment Tests are conducted through Google Forms scheduled through Google Classrooms. As per the guidelines from Anna University, End semester lab exams for II, III and IV year students for 2020-21 odd semester is conducted through Google Classroom and Google meet.

| Companies | Comp

Sample Page for Google classroom

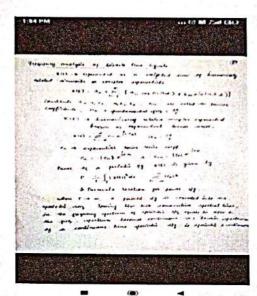
ZOOM:

Zoom is an online platform which came into practice for conducting meeting for faculty members at the beginning of pandemic period when we just stepped into online mode. It is extended for conducting classes which consumes low battery and less network usage even for video classes. Zoom has various provisions such as white board, editor on a shared document which helps the faculty members convenient to handle classes and



make the students to understand the concepts better by bringing live classes in picture. This is mainly helpful for Analytical papers.





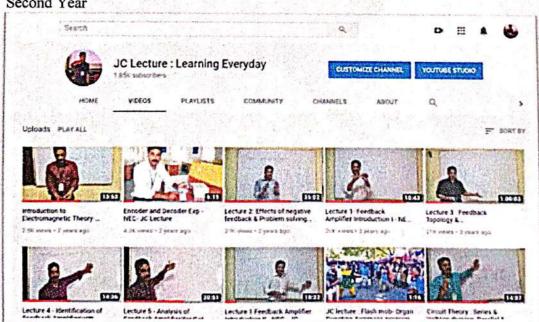
Online class using Zoom app

Video Lectures:

Faculty video lectures are recorded for specific subjects and webcasted. The list of recorded video lectures accessible through YouTube website and a sample page is shown in Figure B.5.6.b:

Faculty: Mr.T.Jayachandran/Assistant Professor Subject: 17ECC10 - Electromagnetic Fields

Sem : Fourth Semester Class : Second Year



Sample Images for Video Lecturing



b) Innovations in instructional delivery and methods:

- Along with chalk and talk, the faculty members teaching analytical and theoretical subjects like
 Analog Electronics, Digital Electronics, Satellite Communication etc., by prepared working
 models which can be carried into classroom and demonstrate the working in an effective
 manner to the students.
- Concept oriented activities are planned in the classroom with the participation of the students.

Case Study:

• Students are given a case study to conduct the investigation. Reports are made to generate by the students after investigation.

Faculty: Mr.G.Pradeepkumar/ Assistant Professor

Subject: 17ECC21 - Embedded and Real Time Systems

Demonstration through Working Models:

 The students of second year were taken to Electronic System Design Lab to explain about the principles of working of amplifiers and oscillators

Faculty: Ms.T.G.Dhaarani/ Associate Professor

Subject: 17ECC08 - Analog Electronics

Blog Spot:

 Faculty members created a blog and uploaded their technical notes to share the knowledge among the students.

Blog Spot details:

Faculty Name: Mr.G.Rathanasabhapathy, AP/ECE

Subjects: Digital Communication, Optical Communication, Analog Communication, Digital

Image Processing.

Blog link: rathanasabhapathy.blogspot.com



Sample Images of Blog Spots

Interdisciplinary Lectures:

To make students aware of latest relevant technologies in different engineering fields.

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Project Lab:

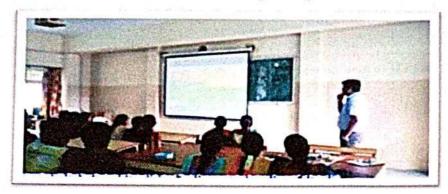
 The Project Laboratory provides a platform for the students to develop their innovative ideas and transform them into projects. This lab provides an environment for students to develop Project Based Learning (PBL) projects and final year main projects.

Faculty

: Mr.M.Srinivasan

Designation: Assistant Professor

Department: Electronics and Communication Engineering.



Interaction with the first year Students in Basic Communication System Concepts



Preparation of Projects for Innovation Day/ NEC





Appreciation for Project Developed in PALS INNOWAH Contest held at HT Research Centre, Chennal.

Classroom quiz sessions:

- Quiz Session helps in creating interest by breaking monotony of regular classes while enhancing the learning experience.
- Concepts are shared by interaction among their peers.

Webinar:

 Web-based seminar is a presentation, lecture, workshop or seminar that is transmitted over the Web using video conferencing software. Expert lectures through webinars make the students to gain more knowledge.



Webinar arranged by MHRD on Leadership Talk Series



Student presentations:

• In many relevant subjects, students deliver presentations to the rest of their classmates. This significantly boosts student's confidence and their learning experience.

Student Seminars:

- The overall objective of this activity is to motivate students for self studyand group study.
- The best practices enhance the listening ability.
- Students learn to deal with conflicting opinions.
 - Presentation improvesself confidence.

Project Based Learning:

- Project Based Learning is a teaching method in which students gain knowledge and skills by working
 for an extended period of time to investigate and respond to an authentic, engaging, and complex
 question, problem, or challenge
- Self-evaluation gives students a sense of accomplishment and further instils responsibility for learning.



The Seven Steps - Project Based Learning

Sample Project: Smoke Detector using IC555

Project Students:

B. Ranjani (18EC58)

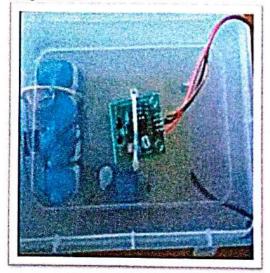
A.Nithiya (18EC50)

R.Preetha (18EC56)

Infrared sensor senses the presence of smoke in atmosphere around the project kit. The 555
 IC is basic timer IC that will generate square pulse when trigger input isgiven to IC. The alarm is activated based on sensor signal.



Project Kit:



A PROJECT GAMER ENGINE REPORT

A PROJECT GAMER LEARNING REPORT

A PROJECT GAMER LEARNING

A PROJECT G

Smoke Detector using IC555

Sample PBL Report

In-Plant Training:

- The students are encouraged to undergo in-plant training during vacations which will improve their skill towards industrial culture.
- · Steps involved:
 - · Identification of reputed industries
 - Getting permission by submitting student bonafide certificate
 - Students undergo IPT
 - · IPT presentation and certificate submission in front of peer committee



Sample Copy of IPT Completion Certificate

