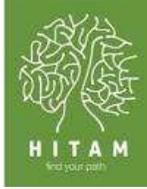


Hyderabad Institute of Technology and Management
Department of ECE

Innovation & Creativity in Teaching Learning

Pedagogy	Implemented by Faculty
PBL	Dr S V Devika
Think Pair Share	Dr K Satish Reddy
Flipped Class	Dr J Rajeshwar Goud
Poster Presentation	Mr P Santosh
Missing steps & Problem Solving	Dr K Bindhu Madhavi
Student Seminars	Mr P Santosh
Problem Solving	Dr Omprakash
Student Presentations	Mr PNV Naveen Kumar
Group Discussion	Mr P Kondalarao
Group Discussion & Student Seminars	Mr D Prashanth Varma
Course Projects & Exit Ticket	Dr S V Devika
Posters Design & animations	Dr B Lokeswara Rao
Real time examples/case studies	Dr J rajeshwar Goud
Student Seminars	Mrs Shanthi Priya
Problem Solving	Mr Santosh P
Missing Steps & Problem Solving	Mrs K Bindhu Madhavi



HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Name of the Activity : Listed the activities
Course : Antenna and Wave Propagation
Name Of Topic : All Modules
Year/Branch : III B. Tech I Semester ECE
Date of conduction : 31/01/2025

AY:2024-25

Prepared by: Dr. Devika SV

Professor of ECE

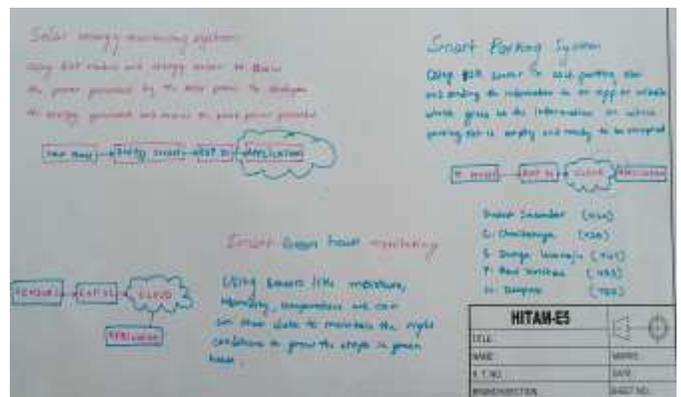
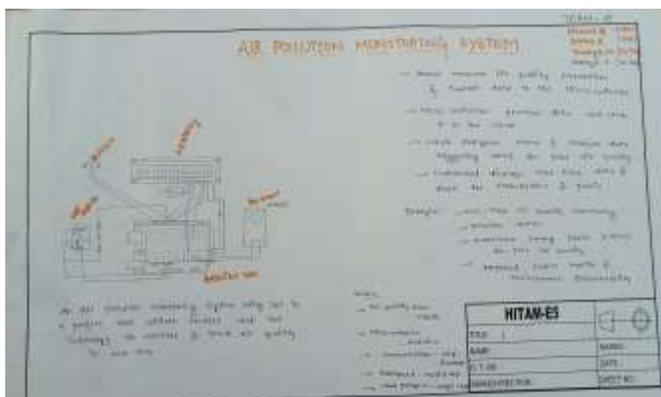
HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Gowdavelli, Village, Medchal, Hyderabad-501401

List of Pedagogies Implement:

- 1) Poster Presentation
- 2) Presentation through animation videos (Flipped Classroom)
- 3) Problem Solving
- 4) Moodle Quiz
- 5) Peer Learning
- 6) Course projects in HFSS
- 7) Modules display
- 8) Research paper writing
- 9) PBL project expo
- 10) Student Presentations

Poster Presentation: This pedagogy aims to enhance students' ability to visually communicate complex ideas in a concise and engaging manner. It helps in developing critical thinking, creativity, and effective presentation skills. The implementation involves students designing posters on a given topic, summarizing key concepts, findings, or innovations. These posters are displayed in a classroom or seminar setting, where students present their work to faculty and peers. The evaluation is based on clarity, content depth, creativity, and the ability to articulate ideas effectively.



Domain: IOT AND EMBEDDED

IDEA-1: SMART PARKING

Components:

- 1. Ultrasonic Sensor
- 2. Arduino
- 3. LED Matrix
- 4. GSM
- 5. Smart Phone

For: Prof. V. K. Chavan
 To: Mr. K. S. Patil
 The Campus, (11-10-18)
 G. Kulkarni (11-10-18)

Smart parking system indicates parking space availability in real-time helping to optimize the overall parking in cities such as when to collect payments, helping traffic etc...

HITAM-ES	
TYPE	
NAME	SHREYA
U.T. NO.	DATE
INSTRUCTOR	SHREYAS

RFID-ENABLED SMART TROLLEY WITH AUTOMATED BILLING SYSTEM

SMART TROLLEY...

Problem Statement:

Smart trolleys for shopping will detect items including any weight loss, amount, expiry and billing from the items and it will inform the user and give shopping experience by highlighting the need for a particular item.

Original Solution:

1. To detect the items in the trolley. 2. To detect the items in the trolley. 3. To detect the items in the trolley. 4. To detect the items in the trolley. 5. To detect the items in the trolley.

For: Prof. V. K. Chavan
 To: Mr. K. S. Patil
 The Campus, (11-10-18)
 G. Kulkarni (11-10-18)

HITAM-ES	
TYPE	
NAME	SHREYA
U.T. NO.	DATE
INSTRUCTOR	SHREYAS

VLSI

Finite State Machine (FSM) used to design and analyze Sequential logic circuits - using Verilog Programming.

ELEVATOR CONTROLLER

- using Verilog Programming

Binary Counter is a digital circuit which generates an output using TIM. The two classes of outputs (before/after) used to run the lift.

7 SEGMENT LED

- using Verilog Programming

A display controller will be designed to control the display number on 7-segment LED display.

HITAM-ES	
TYPE	
NAME	SHREYA
U.T. NO.	DATE
INSTRUCTOR	SHREYAS

Smart Parking System

Using GSM module and Arduino board to detect the space availability in the parking lot and to notify the user about the space availability.

Smart Parking System

Using GSM module and Arduino board to detect the space availability in the parking lot and to notify the user about the space availability.

Using GSM module and Arduino board to detect the space availability in the parking lot and to notify the user about the space availability.

HITAM-ES	
TYPE	
NAME	SHREYA
U.T. NO.	DATE
INSTRUCTOR	SHREYAS

MORSE CODE COMMUNICATION

FLOWCHART

INFORMATION → ENCODER → TRANSMITTER

RECEIVER → DECODER → DESTINATION

Transmitter Section: CODE → ENCODER → TRANSMITTER

Receiver Section: RECEIVER → DECODER → DESTINATION

Morse Code is a telecommunication method which encodes text characters as standardized sequence of two different signal duration called as "dot & dash".

Example: A = . - / B = - . - / C = - . - .

HITAM-ES	
TYPE	
NAME	SHREYA
U.T. NO.	DATE
INSTRUCTOR	SHREYAS

Fig: Posters prepared by the students

Student Presentations: This method is focused on improving students' communication skills and their ability to explain technical concepts clearly. It allows students to take ownership of their learning by researching and presenting topics to their peers. Faculty assess students based on content depth, presentation clarity, confidence, and engagement. Constructive feedback is provided to help students refine their delivery and subject knowledge. This activity also promotes public speaking skills, which are essential for academic and professional success. Rubrics were designed and evaluated.





Fig: Student Presentations

Problem Solving: This method focuses on developing analytical thinking and the ability to apply theoretical concepts to real-world challenges. Students are assigned structured or open-ended problems that require critical thinking and logical reasoning. They work individually or in teams to analyze, propose solutions, and justify their approach. The faculty facilitates discussions and evaluates solutions based on correctness, innovation, and clarity in problem-solving strategies.





Fig: Students working on the problem statements

Modules Display: The objective of this approach is to reinforce conceptual understanding by enabling students to create and showcase models or physical modules related to their coursework. These displays serve as interactive tools that help in visualizing abstract concepts. Students work on building functional or demonstrative models, which are then exhibited for peer and faculty evaluation. The effectiveness of the module, creativity, and clarity in explanation are key assessment criteria. This method bridges the gap between theory and practice.



Fig: Displaying of Horn Antenna, Directional Couplers, Attenuator, Isolator etc

Daily Problem solving in the class room:

Problem statement is given to the students in the classroom in daily classroom activities.

Students work in teams, do brain storming and resolve the problems.

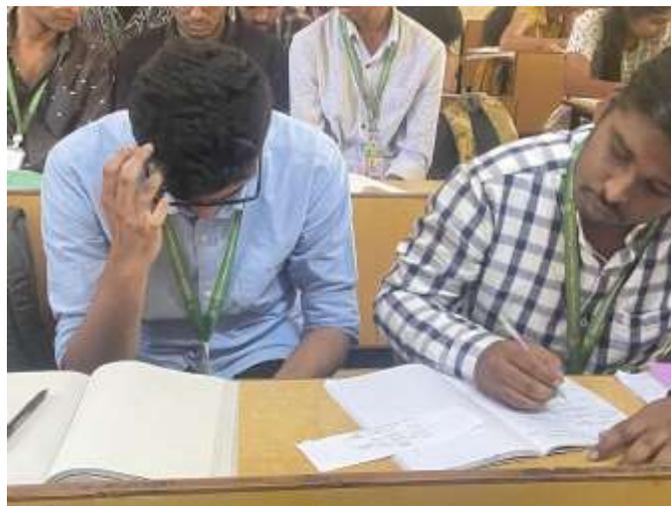


Fig: Students working on the given problem and brain storming

Meditation to the students to break the continuity: The program has significantly reduced stress and anxiety among students, especially during assessments. They feel calmer and more composed, allowing them to approach academic challenges with a positive mindset. Emotional regulation has improved, leading to fewer conflicts and a more harmonious classroom atmosphere. Students have reported increased patience, self-discipline, and resilience in their learning journey.



Fig: Meditation in the classroom before problem solving session

Project Expo: The Problem-Based Learning (PBL) Expo aims to provide students with a platform to showcase their innovative solutions to real-world challenges. It encourages teamwork, critical thinking, and industry-oriented learning. Students work in groups on problem statements provided at the beginning of the semester. The projects are then exhibited in a formal setting where a team from Aalborg University visited our campus to exhibit these projects and appreciated ECE Students. This approach enhances experiential learning and prepares students for practical applications in their careers.



Fig: Prof. Xian Yundu, Head PBL from Aalborg University

HITAM has MOU with Aalborg University. Faculty from HITAM are getting trained from the Aalborg team. Faculty at HITAM implemented PBL for this batch ECE students. We were successful in implementing. The student Learning Outcomes were achieved. The head of the team Prof. Xiang yun du appreciated and poster in her Linked in.



Xiangyun Du · 3rd

Director and professor at UNES...
1d

Following

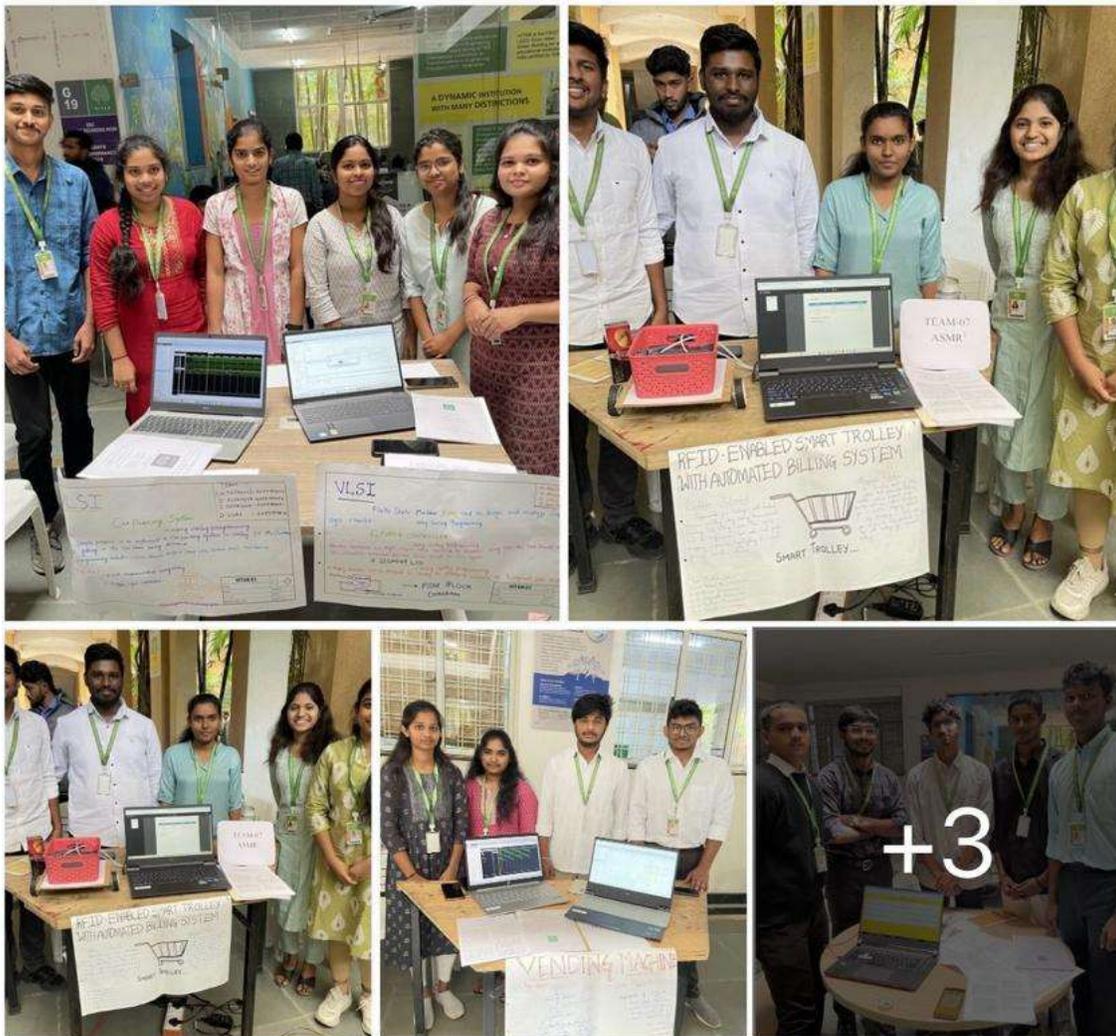
The most meaningful way to know how teachers have learned about pedagogy is through observing what their students do. As an outcome of our first cohort of institutional transformation via and towards PBL HITAM Hyderabad Institution of Technology and Management, we see the students' outcomes - team based project work providing solutions to local problems. The students do not only work out practical solutions but also team based project reports. Mostly impressively they all write research articles which will be submitted to scientific journals. Well done for her two students. Congratulations on the achievements. Thanks to the local coordinator [Surendra Bandi](#) . Thanks for our UCPBL team on this project [Aida Guerra Juebei Chen](#) .

Good to have colleagues visiting together and providing feedback to students [Henrik Worm](#)
[Routhe Euan Lindsay](#)



Congratulations on the achievements. I thanks to the local coordinator **Surendra Bandi** . Thanks for our UCPBL team on this project **Aida Guerra Juebei Chen** .

Good to have colleagues visiting together and providing feedback to students **Henrik Worm**
Routhe Euan Lindsay



👍 60

9 Reposts

👍 Like

💬 Comment

➡ Share

Course Projects in HFSS: This pedagogy is aimed at providing hands-on experience in designing and analyzing antenna structures using HFSS software. Students work on mini-projects related to electromagnetic wave propagation, where they use HFSS to simulate, optimize, and analyze different antenna models. The projects are then presented, with students explaining their methodologies, challenges, and findings. This method enhances problem-solving skills and industry readiness by integrating theoretical knowledge with practical application.

Problem statement: Design and Simulate a suitable antenna for a chosen wireless communication application using MATLAB/OCTAVE/HFSS

- ❑ 15 projects were submitted based on the tool

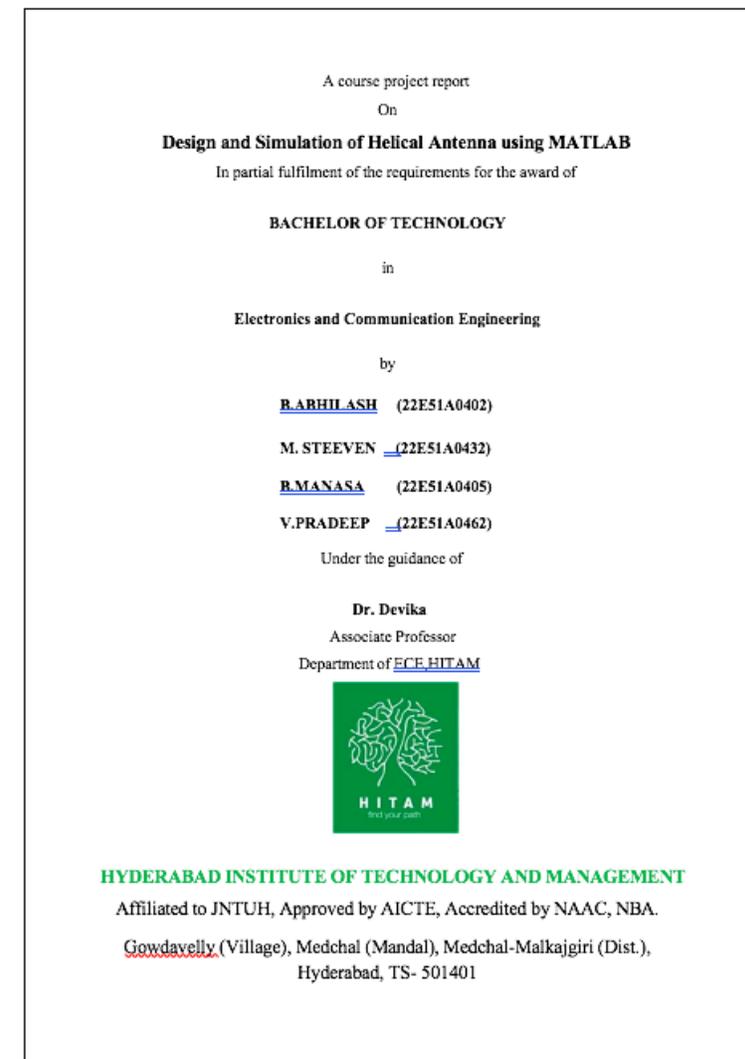


Fig: Project report sample copy

Research Paper Writing: This pedagogy is designed to develop students' research aptitude and technical writing skills. The goal is to encourage exploration of new ideas, critical thinking, and scholarly contributions to the academic community. Students begin by selecting a research topic, conducting a literature review, and formulating their study. Faculty mentors guide them in structuring their paper and improving content quality. Upon completion, the papers may be submitted to conferences or journals, providing students with an opportunity to showcase their work beyond the classroom.

- Design of Circular Microstrip Patch Antenna Array using HFSS For Wireless Applications (Presented in JNTUH Conference)
- Students Insight on the Impact of Problem- Based Learning (Submitted to ICTIEE, But got rejected)
- Parkin slot monitoring system (Still working)
- Enhancing road safety through rear-end collision indicator system for vehicles (Still working)
- Apart for these all 15 PBL projects are converted into papers and got published in UGC journal

Outcomes:

- 1) Real time experience using Animation videos in flipped classroom
- 2) Mid practice using open book exam
- 3) PBL Implementation to give hands on experience to the students
- 4) Poster presentation gave confidence on 2 topics about design of Antennas
- 5) Paper publications created excitement in students to know more about the subject

Challenges: Require support of another faculty.

Number of Students Participated: 62

Student Feedback:

1. More active to participate in the activity
2. Feels more satisfactory with outcome of activity

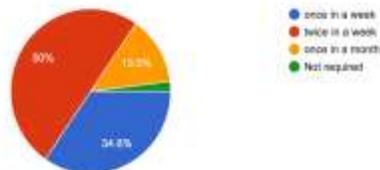
Mode of Feedback: Google forms

Many students appreciate PBL for its engaging and interactive nature. They often report improved critical thinking, problem-solving, and teamwork skills. They find it relevant and feel better prepared for real-world challenges. Some students found PBL initially uncomfortable, as it requires active participation and self-directed learning. They requested for clearer guidelines and expectations. Feedback is taken from the students to understand the students interests and suggestions for effective implementation for further semesters.

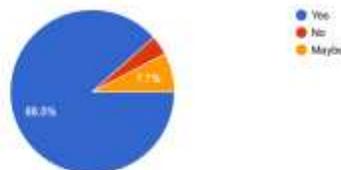
Did you understand the concept of PBL?
52 responses



What frequency you want to attend PBL?
52 responses



Is it improving your interpersonal skills?
52 responses

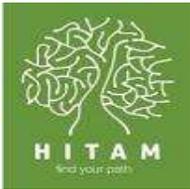


Is 2 hours sufficient to do PBL per week?
52 responses



CONCLUSION:

The Problem-Based Learning is a valuable educational approach for improving student engagement and academic performance in the Antennas and Wave Propagation course. By providing a structured, real-world problem for students to solve, PBL enhances their understanding of complex concepts and prepares them for professional practice. The Academic Performance of the students has been gradually improved with the experiential learning in the class. The positive results from this implementation suggest that PBL can effectively address gaps in traditional teaching methods and contribute to the achievement of Program Outcomes.



Hyderabad Institute of Technology and Management

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A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

SENSORS AND DEVICES

Subject Code: **210E6C005**

B. Tech III Year – II Sem

2024-2025

Prepared by

Dr. K. Satish Reddy

Professor – ECE



Hyderabad Institute of Technology and Management

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PEDAGOGIES IMPLEMENTED:

The course handled is SENSORS AND DEVICES

I have conducted the following activities.

- 1. Think Pair Share**
- 2. Power Point Presentation**
- 3. Simulation Videos**
- 4. Use Case Study**

Topics Covered:

Syllabus: SENSORS AND DEVICES

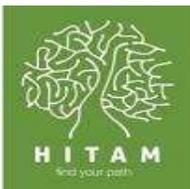
Module I : Introduction to Internet of Things

Module II : IOT and M2M

Module III : IOT Physical Devices and Endpoints

Module IV : Controlling Hardware

Module V : Introduction to Cloud computing



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Pre-requisite: IOT, ADE

Course Objectives:

- To introduce the terminology, technology and its applications
- To introduce the concept of M2M (machine to machine) with necessary protocols
- To introduce the Python Scripting Language which is used in many IoT devices
- To introduce the Raspberry PI platform, that is widely used in IoT applications
- To introduce the implementation of web-based services on IoT devices

Course Outcomes:

- Understand the IoT value chain structure (device, data cloud), application areas and technologies involved.
- Analyze IoT sensors and technological challenges faced by IoT devices, with a focus on wireless, energy, power, and sensing modules
- Market forecast for IoT devices with a focus on sensors
- Explore Internet of Things with the help of preparing projects designed for Raspberry Pi

CO – PO /PSO Mapping Chart

(3/2/1 indicates strength of correlation)

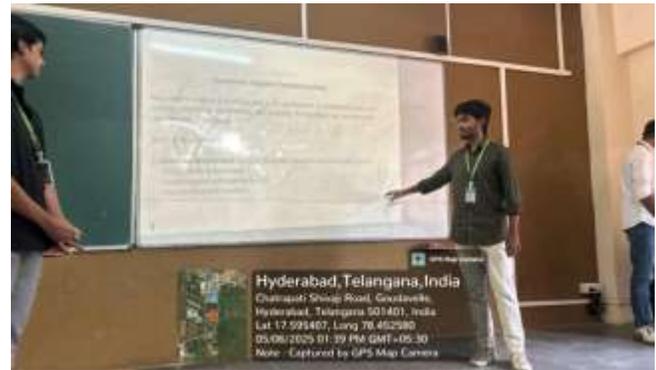
3- High; 2-Medium; 1- Low

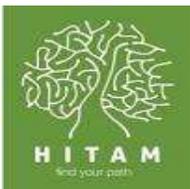
Course Outcomes (COs) /	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P011	P012	PSO1	PSO2
CO1	3	1	2		2				2				1	1
CO2	3	1	2		1									
CO3	1		1		2								2	1
CO4	3	1	2		1				3				2	1



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Rubrics for Continuous Internal Evaluation

S.No.	Parameters
1	Presentation Skills (On the basis of communication, Way of Explanation, Confidence Level)
2	Team work and communication (Ability to work in a team, involvement and communication among team)
3	Execution (On the basis of working condition of the presented concept or model)
4	Day to Day Behavior (On the basis of their response to questions and general interest in Class)
5	Technical Skills (On the basis of application of engineering techniques to make the model)
	Total Marks – 20+5M

Assignments & Weekly Quiz

Implementation:1) Divided students into groups and each group is given with each set of questions to write and study

2) Divided All Units into 5 set of questions to give each set to each group

3) Assigned each group to learn one set of questions and have written same and asked students share their knowledge in their set of questions with other group of students.

4) All the students learned all set of questions.

Topic chosen: Important topics from all 5 Modules



Hyderabad Institute of Technology and Management

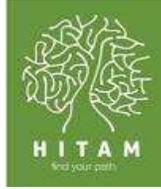
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TEXT BOOKS:

1. Internet of Things - A Hands-on Approach, Arshdeep Bahga and Vijay Madisetti, Universities Press, 2015, ISBN: 9788173719547
2. Getting Started with Raspberry Pi, Matt Richardson & Shawn Wallace, O'Reilly (SPD), 2014, ISBN: 9789350239759
3. Raspberry Pi Cookbook, Software and Hardware Problems and solutions, Simon Monk, O'Reilly (SPD), 2016, ISBN 9789352133895

REFERENCE BOOKS:

1. Peter Waher, 'Learning Internet of Things', Packt Publishing, 2015
2. Peter Friess, 'Internet of Things – From Research and Innovation to Market Deployment', River Publishers, 2014
3. N. Ida, Sensors, Actuators and Their Interfaces, SciTech Publishers, 2014.



HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

DEPARTMENT OF ECE

A PEDAGOGY REPORT

ON

Electromagnetic Theory and Transmission Lines

(For the Academic year 2024-25)

Name of Activities:

- 1) Flipped Classroom**
- 2) Peer learning**
- 3) PBL Activity**
- 4) Animation**
- 5) NPTEL Videos**
- 6) Slip test**

Year/Branch: II B. Tech II Semester ECE

Prepared by: Dr. J. Rajeshwar Goud, M. E., Ph.D.

Associate Professor of ECE

HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Gowdavelli, village Medchal, Hyderabad-501401

Course Objectives: This course will enable students to

1. To learn the Basic Laws, Concepts and proofs related to Electrostatic Fields and Magnetostatic Fields, and apply them to solve physics and engineering problems.
2. To distinguish between static and time-varying fields, and understand the significance and utility of Maxwell's Equations and Boundary Conditions, and gain ability to provide solutions to communication engineering problems.
3. To study the propagation, reflection and transmission of planewaves in bounded and unbounded media.

Course Outcomes: Upon completing this course, the student able to

1. Acquire the knowledge of Basic Laws, Concept and proofs related to Electrostatic Fields and Magneto static Fields.
2. Characterize the static and time-varying fields, establish the corresponding sets of Maxwell's Equations and Boundary Conditions.
3. Analyze the Wave Equations and classify conductors, dielectrics and evaluate the UPW Characteristics for several practical media of interest.
4. Analyze the Design aspect of transmission line parameters and configurations.

1. Flipped classroom:



A flipped classroom is an instructional strategy and a type of blended learning, which aims to increase student engagement and learning by having students complete readings at home and work on live problem-solving during class time.

2. Peer Learning:



Introduction of the Pedagogy: After completion of the unit, students were asked to write any 3 questions on small piece of paper, the paper of each student is shared with other peers. The student who receives the questions should give answers for the same. students go through 10 important points in the corresponding topic/unit.

Expected outcome: Student recalls 10-15 important short answer questions through this activity.

3. PBL Activity



Activity: Problem based Learning

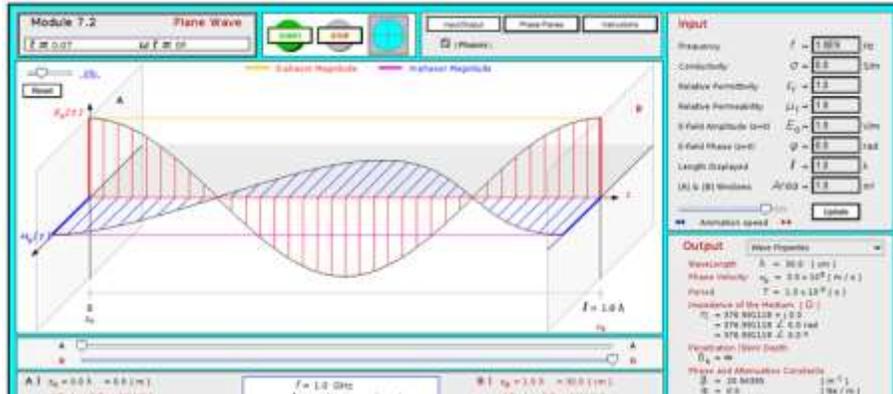
Assessment: Problem solving

Rubrics: Content understanding (4 M), Presentation (3 Marks), Solution (3 M)

To know the wave propagation in different mediums, you required to solve the uniform plane wave problems to identify the propagation of EM wave.

Expected outcome: Student team is expected to solve the given problems to understand the EM wave characteristics

4. Animation

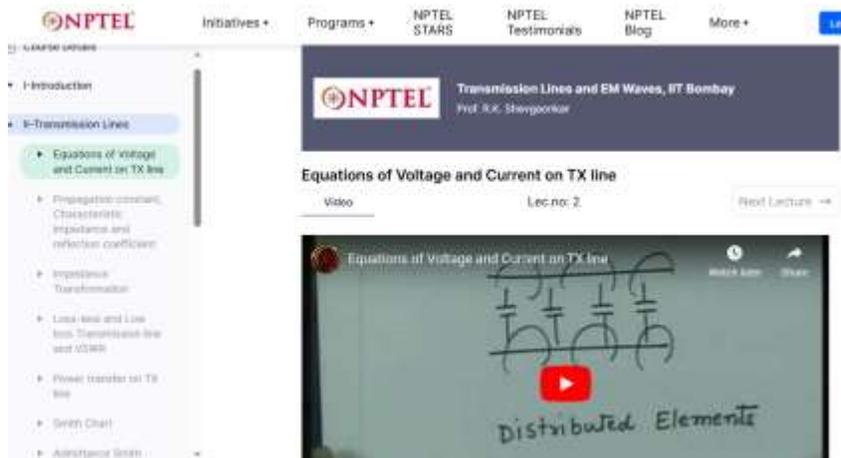


Animation is an integral part of a modern teaching focused on the development of a student's personality. On the whole, we could say that pedagogical animation is about using different methods and activities, or using different methods, techniques and tools to help create educational processes in a playful way.

Expected outcome:

Students exposed to animation-based teaching methods exhibit higher levels of attention retention, better reproduction of learned material, and increased motivation compared to those following traditional teaching methods.

5. NPTEL Videos



NTEL videos will delivered by IIT professor, they will explain the concept in clear manner, student have to listen the concepts at any time.

Expected outcome:

Students exposed to NPTEL-based teaching will give clear understanding on critical topics.

6. **Slip Test:**



After completion of each module slip test conducted. Schedule of test intimated 5days before to the student. After completion of test, Answer scripts are evaluated and marks awarded.

E-RESOURCES/Textbooks Referred:

TEXT BOOKS:

1. Engineering Electromagnetics, William H. Hayt Jr. and John A. Buck- 8th Ed., McGraw Hill, 2014
2. - Principles of Electromagnetics, Matthew N.O. sadiku and S.V. Kulkarni 6' Ed., Oxford University Press, Aisan Edition, 2015.

ICT USAGE:

<https://nptel.ac.in/courses/117101056>

BEST Performer: 22E51A0453- SUNKI AKHILA, 22E51A0436- PEDDINTI HERAMBA SAI GANESH & 22E51A0454- SUREDDI ALEKHYYA

Slow performer: 22E51A0408- CHITTARKA RISHABH RAMESH, 22E51A0448- SHADIL AMEEN .P.K & 22E51A0460- VADDI REDDY PRAVEEN REDDY

Suggestions given to Slow Learner: Personal counselling to motivate students for active participation

NO. OF STUDENTS PARTICIPATED: 68

STUDENT FEEDBACK:

1. Experiential Learning & Participative Learning

MODE OF FEEDBACK: ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Introduction of Internet of Things (IIOT)

Subject Code: 22EC6000E

III B. Tech. ECE I Semester, 2024-2025

Prepared by

Dr. K. Satish Reddy

Professor – ECE

Hyderabad Institute of Technology and Management

Gowdavelli, Medchal, Hyderabad-501401

PEDAGOGIES IMPLEMENTED:

The course handled is Fundamentals of Internet of Things. I have conducted the following activities.

1. Think Pair Share/Open Discussion
2. Power Point Presentation
3. Practical PBL Sessions
4. NPTEL Videos
5. Open Book Exam/Assignments

Topics Covered:

Syllabus (IIOT R22 Regulation):

Unit I : Introduction to Internet of Things

Unit II : IOT Hardware and Devices

Unit III : M2M, Introduction to Arduino and NodeMCU

Unit IV : Introduction to Python and Raspberry Pi

Unit V : Cloud Computing and Industrial IOT

Problem Solving, Think Pair and Share

Observation: Some Students were not concentrating and not responding.

Impact: Individual attention was given to those who were not concentrating. I observed that most of the students answered the questions in the subsequent classes.

Pedagogy Topics: New Concepts (Industrial IOT, case studies) were given as topics

Implementation: Students were required to understand and share what they have learnt and explain it to each other, as well as the faculty.

Course Outcomes

CO1- Describe what IoT is and how it works today

CO2 - Able to understand the different types of controllers.

CO3- Analyze the different types of technologies and communication process.

CO4- Understand the cloud computing techniques.

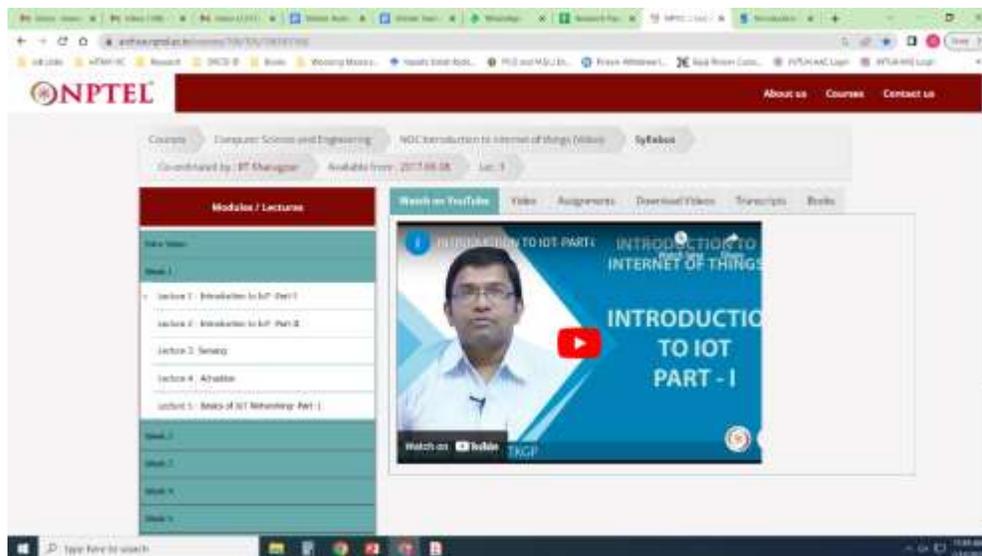
CO – PO Mapping

Course Outcomes (COs) / Program Outcomes (POs)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P011	PO12
CO1: Describe what IoT is and how it works today	3	2			1							
CO2: Able to understand the different types of controllers.	1	3										
CO3: Analyze the different types of technologies and communication process.	2	2							2	3		
CO4: Understand the cloud computing techniques.	2	3	1						2	3		1



PPT (Sessions 1 and 2) by IIIrd Yr ECE Students

NPTEL Video



<https://archive.nptel.ac.in/courses/106/105/106105166/>

Rubrics for Continuous Internal Evaluation

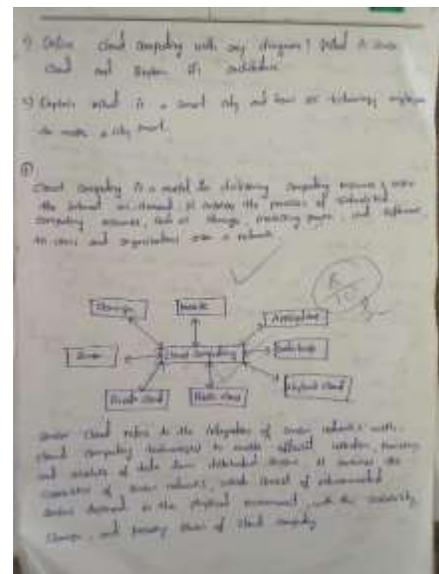
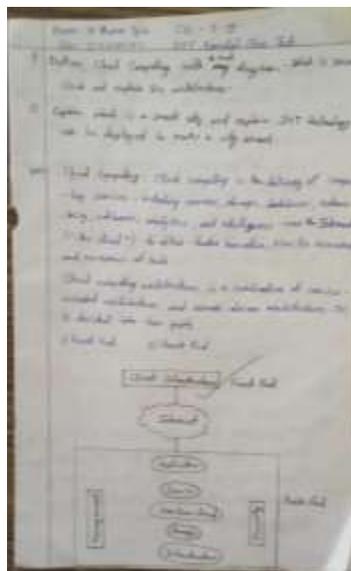
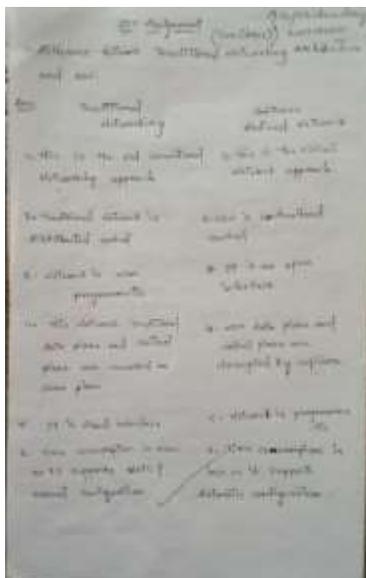
S.No.	Parameters
1	Presentation Skills and assignments/Open Book Exams (On the basis of communication, Way of Explanation, Confidence Level)
2	Team work and communication (Ability to work in a team, involvement and communication among team)
3	Day to Day Behavior (On the basis of their response to questions and general interest in Class)
4	PBL- Stage 1 (On the basis of Working condition of the presented concept of model)
5	PBL- Stage 1 (On the basis of application of engineering techniques to make the model)
	Total Marks – 10+5M

Assignments & Weekly Quiz

Implementation: 1) Divided students into groups and each group is given with each set of questions to write and study

2) Divided All Units into 5 set of questions to give each set to each group

Topic chosen: All 5 Units important topics



TEXT BOOKS:

1. "The Internet 'of Things: Enabling Technologies, Platforms, and Use Cases", by Pethuru Raj and Anupama C. Raman (CRC Press)
2. "Make sensors": Terokarvinen, kemo, karvinen and villey valtokari, 1st edition, maker media, 2014.
3. "Internet of Things: A Hands-on Approach", by Arshdeep Bahga and Vijay Madisetti

REFERENCE BOOKS:

1. Vijay Madisetti, Arshdeep Bahga, "Internet of Things: A Hands-On Approach"
2. Walteneus Dargie, Christian Poellabauer, "Fundamentals of Wireless Sensor Networks: Theory and Practice"
3. Beginning Sensor networks with Arduino and Raspberry Pi – Charles Bell, Apress, 2013



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Name Of Activity : **Poster Presentation**
Course : **Microelectronic Circuits**
Name Of Topic : **ADC and DAC**
Year/Branch : **III B.Tech I Semester ECE**
Date of conduction : **24/12/2024**

AY:2024-25

Prepared by: P SANTHOSH M.Tech., MIETE, (Ph.D.)

Assistant Professor (ECE)

Hyderabad Institute of Technology and Management

Gowdavelli,vill, Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

Poster presentations promote active learning by encouraging students to synthesize and visually communicate complex ideas. They enhance critical thinking, creativity, and public speaking skills. This format fosters engagement and collaboration, making learning interactive and dynamic.

IMPLEMENTATION:

- One day before I gave the topic to the students that is ADC and DAC

PROOFS:



Fig. Poster presentation

OUTCOME:

With this activity students can learn the topic deeply as well it will improve communication skills and removes stage fear also.

CHALLENGES:

1. Require support of another faculty.

NO.OF STUDENTS PARTICIPATED: 52

STUDENT FEEDBACK:

1. More active to participate in the activity
2. feels more satisfactory with outcome of activity

MODE OF FEEDBACK: ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Name Of Activity : Missing steps and problem solving

Course : Digital signal Processing

Name Of Topic: Discrete Fourier transform

Year/Branch : III B.Tech II Semester ECE

Date of conduction : 24/03/2025

AY:2024-25

Prepared by: Mrs.K Bindu Madhavi

Associate Professor (ECE)

Hyderabad Institute of Technology and Management

Gowdavelli,vill, Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

Missing Steps and Problem solving helped the students to remember the formulae, properties and steps to find the solution of a problem very easily.

IMPLEMENTATION:

- Formed the team of three members
- Each team will be given the analysis with missing formula or design steps
- Time :20 mnts
- With in the time they need to Complete the circuit and these papers will be interchanged with the other batches
- They will award the marks with the rubrics given by me
- Finally it will be checked for one more time by me and the marks will be revealed in the Whatsapp Group

PROOFS:



Fig 1. Problem Solving

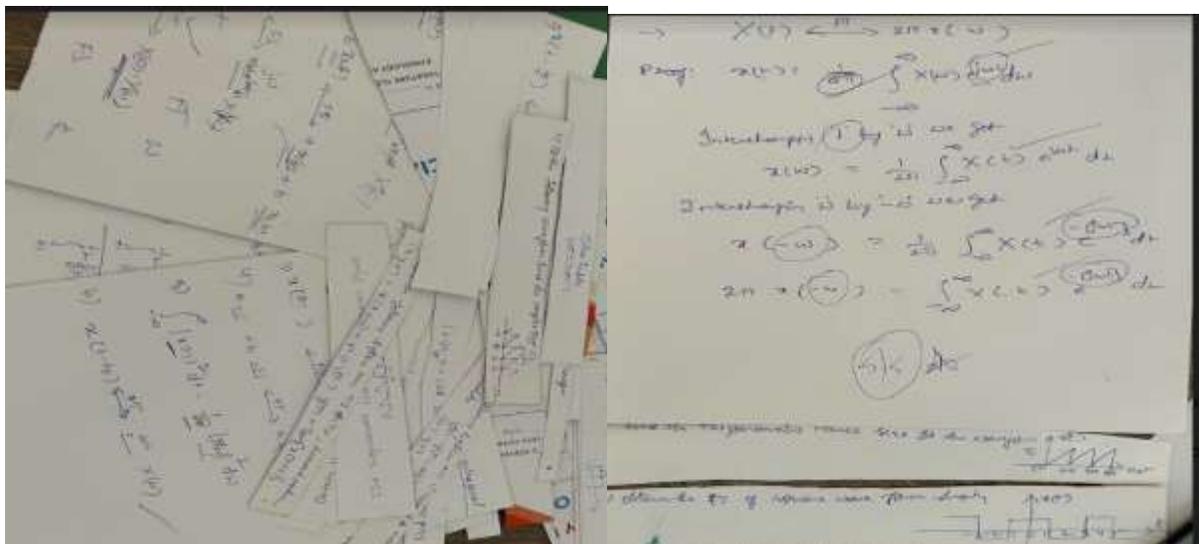


Fig 2. Missing steps and problems

OUTCOME:

With this activity students can learn the topic deeply as well it will improve confidence on subject and hence to improve pass percentage.

CHALLENGES:

No Challenges

NO.OF STUDENTS PARTICIPATED: 43

STUDENT FEEDBACK:

1. More active to participate in the activity
2. feels more satisfactory with outcome of activity

MODE OF FEEDBACK: ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Name Of Activiy : Student Seminars

Course : Digital Logic Design

Name Of Topic : Logic gates using Universal gates

Year/Branch : II B.Tech II Semester ECE

Date of conduction : 23/04/2024

AY:2023-24

Prepared by: P SANTHOSH M.Tech., MIETE, (Ph.D.)

Assistant Professor (ECE)

Hyderabad Institute of Technology and Management

Gowdavelli,vill, Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

The Student Seminar activity is conducted in the classroom only. In this activity Every student has to come and present their in front of their classmates.

IMPLEMENTATION:

- One day before I gave the topic to the students that is logic gates using universal gates
- In this activity I will call randomly any student, he/she has to come and design the given logic gate using universal gates on the board.

PROOFS:



Fig. Student Seminar

OUTCOME:

With this activity students can learn the topic deeply as well it will improve communication skills and removes stage fear also.

CHALLENGES:

1. Require support of another faculty.

NO.OF STUDENTS PARTICIPATED: 54

STUDENT FEEDBACK:

1. More active to participate in the activity
2. feels more satisfactory with outcome of activity

MODE OF FEEDBACK: ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Digital Signal Processing

III B.Tech ECE II Sem, 2023-24

Prepared by:

Dr. Omprakash Gottam

Asst. Prof.

Hyderabad Institute of Technology and Management

Gowdavelli,vill Medchal, Hyderabad-501401

PEDAGOGY REPORT:

The course handled is Digital Signal Processing. I have conducted the following activities.

1. Flipped Classroom

2. Problem solving

1. Flipped Classroom

Topic: Calculating FFT and IFFT using DIT-FFT and DIF-FFT algorithms

The videos containing the derivation of the FFT algorithms are shared with the students in the WhatsApp group. At least two problems per topic are discussed in the classroom.

Observation: Students watched the videos on the derivation. This saved time in the classroom and problems on each topic were discussed elaborately. One problem was solved first on the board. Students are given time to solve second problem. Randomly one student is picked to solve the problem on the board

Impact: Students improved their problem-solving skills and there was knowledge sharing during the peer-to-peer discussion.

2. Activity: Problem solving

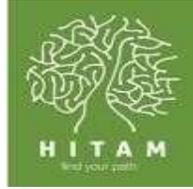
Digital signal Processing is a mathematical subject where problems have to be solved by applying formulas in topics such as Fourier series, DFT, DIT-FFT, DIF-FFT. Students were given problems on board and asked to solve in their notebooks. They were allowed to discuss among themselves. This kind of peer to peer discussion helped many students to understand how to apply formula on the given problems.

Observation: Healthy discussion took place in the classroom which helped the students to gain knowledge on problem solving.

Impact: Many students are comfortable in solving problems and applying the necessary formulas.

TEXT BOOKS:

1. Digital Signal Processing by Ramesh Babu
2. Discrete Time Signal Processing – A. V. Oppenheim and R.W. Schaffer, PHI, 2009
3. Digital Signal Processing, Principles, Algorithms, and Applications: John G. Proakis, Dimitris G. Manolakis, Pearson Education / PHI, 2007



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Sensors And Devices

III B. Tech Sensors and Devices II Sem, 2023-2024

AY:2023-2024

Prepared by: P.N.V. Naveen Kumar

Asst. Professor

Hyderabad Institute of Technology and Management

Gowdavelli (vill), Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

The course handled is Introduction to IoT I have conducted various activities in Introduction to IoT courses mention below.

I have implemented Seminar on Netconf. This topic is very important external exams point of view.

I have followed these steps to evaluate the pedagogy

Making them as a group
Identification of concept
Block diagram
Differences
Presentation
.

IMPLEMENTATION: Classroom activity for topics well planned and executed as per schedule.

PROOFS:



Topics: Netconf

Pedagogies: Seminar

Observation:

Almost all students participated

Impact: I conducted activity in 3rd hour and almost all students actively participated. I have asked questions what students are discussed, approximately 95% of the students answered correctly.



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Wireless Sensor Networks

IV B.Tech ECE II Sem, 2023-2024

Prepared by:

Dr. Omprakash Gottam

Asst. Prof.

Hyderabad Institute of Technology and Management

Gowdavelli village, Medchal, Hyderabad-501401

PEDAGOGY REPORT:

The course handled is Wireless Sensor Networks (WSN). I have used the following pedagogies.

1. Power Point Presentation

2. Video Reflections

1. Power Point presentation

WSN is a theory-oriented subject. Most of the concepts are presented using power point. The concepts on routing protocols and forming routing tables are better demonstrated with the help of power point presentation.

Observation: Students are able to clearly understand and visualize from the power point presentation. The bullet points mentioned are the consolidated points which are useful in remembering the theory points.

Impact: Students improved understanding on the subject with better visualization on some of the concepts.

2. Video Reflections

Below link gives an introduction and overview of all the applications present in the wireless sensor networks

<https://www.youtube.com/watch?v=urWv-EqS9M>

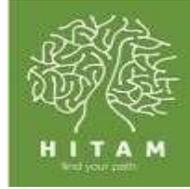
Below link shows how different sensors are connected to the sink and how data can be accessed. The video shows how to setup wireless sensor network using different sensors.

<https://www.youtube.com/watch?v=GUvv41ij50E>

Below link shows how WSN sensors are useful in detecting damages in industrial applications. The remote monitoring of pipelines is demonstrated using WSN.

<https://www.youtube.com/watch?v=GORDqCKsHMo>

Observation: The videos helped the students for better understanding of the subject and get a clear view on the scope and applications of the WSN subject.



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Name of the activity: Group Discussion

Course : CONTROL SYSTEMS

Name of the Topic : Electrical Vs Mechanical components

Year/Branch : III B.Tech I Sem ,ECE

Date of Conduction : 11/10/2022

AY : 2022-23

Prepared by: Kondalarao Punati

Assistant Professor,ECE

Hyderabad Institute of Technology and Management

Gowdavelli,vill Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

The **Group Discussion** 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 (**Group Discussion**) puzzle

IMPLEMENTATION:

- ✓ I formed 6 teams with size of 6 members according to order of their roll numbers.
- ✓ I assigned different segments (total 6 parts) to individual student in group.
- ✓ I gave 15 min to learn independently, later I formed teams who complete same segment in groups as a new group named as expert group.
- ✓ In expert group they shared their points and returned to their own group after completing the discussion in expert group.
- ✓ Now students shared complete information to their own groups and finally they presented.



OUTCOME:

It helps students learn cooperation as group members share responsibility for each other's **learning** by using critical thinking and **social skills** to complete an assignment. Subsequently, this strategy helps to improve listening, communication, and problem-solving skills.

E-RESOURCES/Textbooks Referred : IIEECP Webinar on Collaborative activity.**Text books:** Modern electronics

ICT USAGE: COMPUTERS, SOUND SYSTEM, MOBILE, Projector.

TIME TAKEN TO COMPLETE THE ACTIVITY: 60 min

BEST Performer:

Thirupathi and

Nagesh

Slow performer:

Pradeep & sai

Suggestions given to Slow Learner: counseling given to student how to mingle with their classmates to share their points.

CHALLENGES:

1. Time not sufficient
2. Require support of another faculty.

NO.OF STUDENTS :6

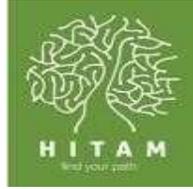
PARTICIPATED: 42

NO.OF BATCHES MADE: 7

STUDENT FEEDBACK:

1. More active to participate in the activity
2. feels more satisfactory with outcome of activity

MODE OF FEEDBACK: ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Data Communications and Networks

III B.Tech ECE I Sem, 2022-2023

AY: 2022-2023

Prepared by:

D.Prasanth Varma

Asst. Professor

Hyderabad Institute of Technology and Management

Gowdavelli (vill), Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

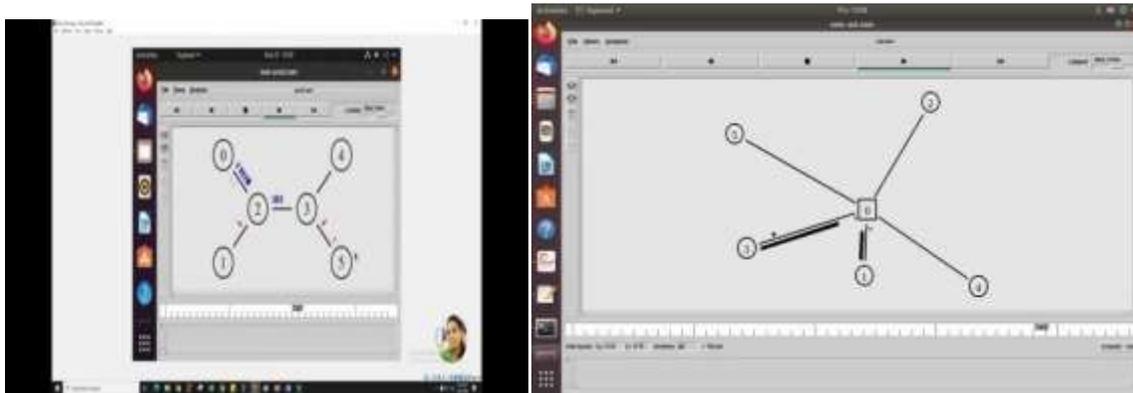
The course handled is Data Communications and Networks. I have conducted various activities in DCN course as mention below.

IMPLEMENTATION: Classroom activity for topic is well planned and executed as per schedule.

PROOFS:

Topics: Data Flow and Physical structures

Pedagogies: Demonstration



Observation:

Almost all students participated in demonstration activity.

Impact: I conducted activity in 6th hour and almost all students actively participated. I have asked 1 question in mid-1 from same topic, approximately 90 % of the students answered correctly.

Topic: IPv4 and IPv6 Addressing

Pedagogies: Group Discussion



Observations: IP addressing concept is little difficult to understand. Group discussion helped me to make this concept clear especially to academically weak students.

Impact: Students have got good idea.

Topic: Network service models, Virtual and datagram networks, Origins of VC and DG

Pedagogies: Student Seminars



Observation: Students actively involved in the class and taught to their friends. However academically weak student learned but when it came to delivery on board most of them hesitated.

Impact: Approximately 70 % of the students prepared well to teach on the board. Students took responsibility to prepare material for assigned topic and share in the group

Topic: Units-1,2,3

Pedagogies: Guest Lecture





Observation: Students actively participated in the guest lecture.

Impact: After Guest lecture students came to know how each and every unit and topic are interlinked.

E-RESOURCES/Textbooks Referred:

Text books: DCN by Tanenbaum and Forouzan

ICT USAGE:

CONTENTS OUT OF SYLLABUS: NIL

MODE OF FEEDBACK: ORAL



HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

DEPARTMENT OF ECE

A TECHNICAL REPORT

ON

PEDAGOGY IMPLEMENTED IN DIGITAL IMAGE PROCESSING

(For the Academic year 2022-23)

Name of Activities:

- 1) Course projects**
- 2) Exit ticket**
- 3) Peer Learning**

Year/Branch: IV B. Tech I Semester ECE

Prepared by: Dr. Devika SV, M. Tech, PhD

Professor of ECE

HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Gowdavelli, village Medchal, Hyderabad-501401

Course Projects:

Introduction:

Topic: Image processing techniques

Unit No: 5

IMPLEMENTATION:

Students were formed into batches

- Each batch consists of minimum 1 student to maximum 4 students
- A review was scheduled, and presentations were delivered by the students
- The posters were submitted by respective batches
- Assessment was done based on the performance of the students

Criteria	Ratings	Points
Following the procedure	Clearly understood the procedure-3 Not followed the procedure properly-0	3
Cross checking with the team members and Group performance	Individually solving problem and discussion with peers-3 Individually solving problem without discussion-2 Not solving the problem-0	3
Subject knowledge	100% knowledge on presentation-5 80-90% knowledge on presentation-3 Below 80%(but followed procedure)-2 Below 80%(Not followed procedure)-0	5
Time management	Completion of the topic with clear understanding within given stipulated time -4 Clear understanding, not completed within the time limit-3 None-0	4

SAMPLE COURSE PROJECT REPORT



HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(Accredited by NAAC, Affiliated to JNTUH, Hyderabad, TS)

COURSE PROJECT: *Digital Image Processing*

PERIODIC NOISE REMOVAL

PROBLEM STATEMENT:

Periodic noise is an unwanted signal that interferes with the source image or signal at a random frequency, depending on its source. Generally, this interference can be added to the image from nature, the electricity network, or electronics devices.

Noise is made up of pixels not correctly representing the color or exposure of the scene. In this article, we will see how to remove noise from the digital images.

AIM:

1. To generate and insert periodic noise in image
2. To de-noise this periodic noise from image using frequency domain

SOFTWARE REQUIREMENTS: MATLAB

THEORY:

Periodic Noise Addition

A periodic noise has been added to the twin image shown below; the noisy image has been transformed to frequency domain (using the 2D-DFT). The extra two “spikes away from the centre correspond to the noise just added. In general the tighter the period of the noise, the further from the centre the two spikes will be. This is because a small period corresponds to a high frequency (large change over a small distance), and is therefore further away from the centre of the shifted transform.

Periodic noise may occur if the imaging equipment (the acquisition or networking hardware) is subject to electronic disturbance of a repeating nature, such as may be caused by an electric motor. We can easily create periodic noise by overlaying an image with a trigonometric function:

```
>> [x,y]=meshgrid(1:256,1:256);
>> p=1+sin(x+y/1.5);
>> tp=(double(t)/128+p)/4;
```

We will now remove these extra spikes, and invert the result. If we put `pixval` on and move around the image, we find that the spikes have row, column values of (156, 170) and (102,88). These have the same distance from the centre: 49.0918. We can check this by

```
>> z=sqrt((x-129.)-2+y(-129.)-2);
>> z(156,170)
>> z(102,88)
```

There are two methods we can use to eliminate the spikes, we shall look at both of them.

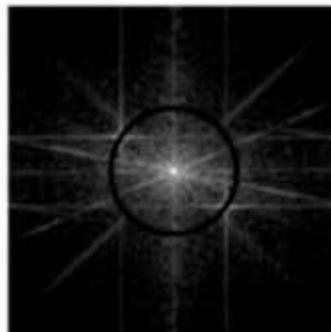
Band reject filtering. We create a filter consisting of ones with a ring of zeroes; the zeroes lying at a radius of 49 from the centre:

```
>> br=(z < 47 | z > 51);
```

where z is the matrix consisting of distances from the origin. This particular ring will have a thickness large enough to remove the spikes. Then as before, we multiply this by the transform:

```
>> tbr=tf.*br;
```

and this is shown in figure 6.2(a). The result is that the spikes have been blocked out by this filter. Taking the inverse transform produces the image shown in figure 6.2(b).



(a) A low-pass filter



(b) After inverse transform


```

baseFileName = 'cameraman.tif';

% Get the full filename, with path prepended.
fullFileName = fullfile(folder, baseFileName);

% Check if file exists.
if ~exist(fullFileName, 'file')

    % File doesn't exist -- didn't find it there. Check the search path for it.

    fullFileName = baseFileName; % No path this time.

    if ~exist(fullFileName, 'file')

        % Still didn't find it. Alert user.

        errorMessage = sprintf('Error: %s does not exist in the search path folders.',
fullFileName);

        uiwait(warndlg(errorMessage));

        return;

    end

end

grayImage = imread(fullFileName);

[rows columns numberOfColorBands] = size(grayImage);

if numberOfColorBands > 1

    grayImage = rgb2gray(grayImage);

end

subplot(2, 3, 1);

imshow(grayImage, [0 255]);

set(gcf, 'Name', ['Results for ' fullFileName]);

title('Original Image', 'FontSize', fontSize);

set(gcf, 'units', 'normalized', 'outerposition', [0 0 1 1]); % Maximize figure.

```

```

% Add big ripples to it.
rowVector = (1 : rows)';
period = 10; % 20 rows
amplitude = 0.5; % Magnitude of the ripples.
offset = 1 - amplitude; % How much the cosine is raised above 0.
cosVector = amplitude * (1 + cos(2 * pi * rowVector / period))/2 + offset;
ripplesImage = repmat(cosVector, [1, columns]);
subplot(2, 3, 2);
minValue = min(min(ripplesImage))
maxValue = max(max(ripplesImage))
imshow(ripplesImage, [0 maxValue]);
axis on;
title('Ripples to multiply the image by', 'FontSize', fontSize);
% Multiply the ripples by the image to get an image with periodic "noise" in it.
grayImage = ripplesImage .* double(grayImage);
minValue = min(min(grayImage))
maxValue = max(max(grayImage))
subplot(2, 3, 3);
imshow(grayImage, [0 255]);
axis on;
title('Original Image with Periodic "Noise" ripples', 'FontSize', fontSize);
% Compute the 2D fft.
frequencyImage = fftshift(fft2(grayImage));
% Take log magnitude so we can see it better in the display.

```

```
amplitudeImage = log(abs(frequencyImage));
minValue = min(min(amplitudeImage))
maxValue = max(max(amplitudeImage))
subplot(2, 3, 4);
imshow(amplitudeImage, []);
caption = sprintf('Notice the two spikes\nperpendicular to the periodic frequency');
title(caption, 'FontSize', fontSize);
axis on;
% zoom(10)

% Find the location of the big spikes.
amplitudeThreshold = 10.9;
brightSpikes = amplitudeImage > amplitudeThreshold; % Binary image.
subplot(2, 3, 5);
imshow(brightSpikes);
axis on;
title('Bright Spikes', 'FontSize', fontSize);
% Let user see the image.
promptMessage = sprintf('The image below shows the bright spikes.\nNow we will exclude
the central spike.');
titleBarCaption = 'Continue?';
button = questdlg(promptMessage, titleBarCaption, 'Continue', 'Cancel', 'Continue');
if strcmpi(button, 'Cancel')
    return;
end
```

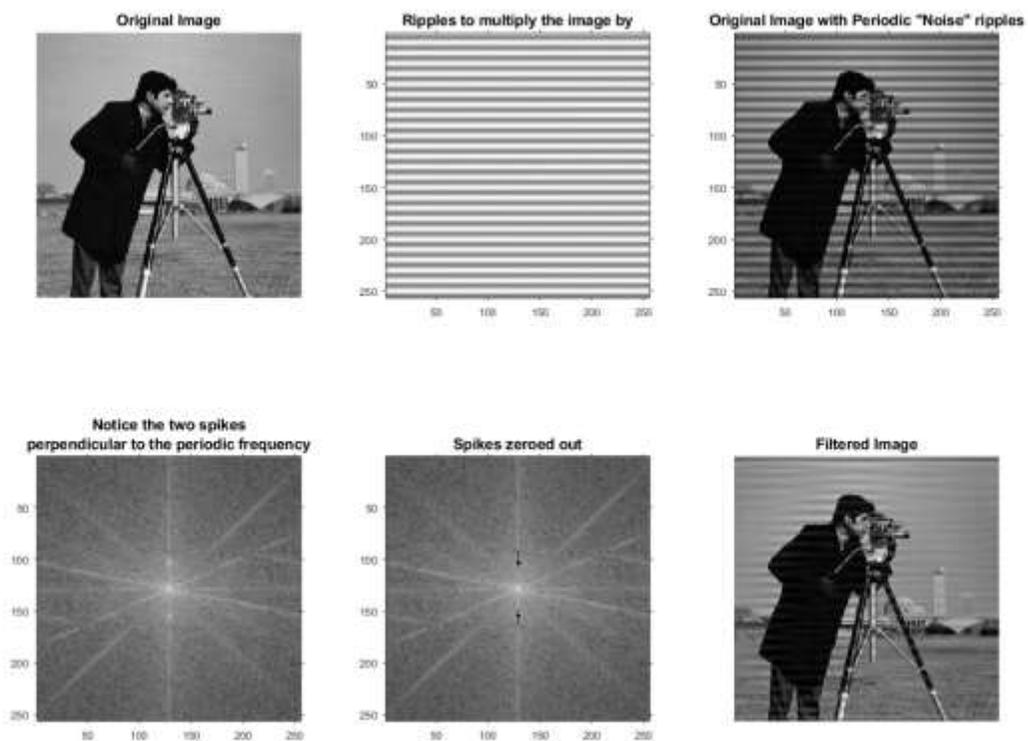
```
% Exclude the central DC spike. Everything from row 115 to 143.
brightSpikes(115:143, :) = 0;
imshow(brightSpikes);
title('Bright spikes other than central spike', 'FontSize', fontSize);
promptMessage = sprintf('Now we will use these bright spikes to filter (mask) the
spectrum. ');
button = questdlg(promptMessage, titleBarCaption, 'Continue', 'Cancel', 'Continue');
if strcmpi(button, 'Cancel')
return;
end
% Filter/mask the spectrum.
frequencyImage(brightSpikes) = 0;
% Take log magnitude so we can see it better in the display.
amplitudeImage2 = log(abs(frequencyImage));
minValue = min(min(amplitudeImage2))
maxValue = max(max(amplitudeImage2))
subplot(2, 3, 5);
imshow(amplitudeImage2, [minValue maxValue]);
axis on;
title('Spikes zeroed out', 'FontSize', fontSize);
% zoom(10)
filteredImage = ifft2(fftshift(frequencyImage));
amplitudeImage3 = abs(filteredImage);
minValue = min(min(amplitudeImage3))
maxValue = max(max(amplitudeImage3))
```

```

subplot(2, 3, 6);
imshow(amplitudeImage3, [minValue maxValue]);
title('Filtered Image', 'FontSize', fontSize);
% set(gcf, 'units','normalized','outerposition',[0 0 1 1]); % Maximize figure.
% %

```

OUTPUT/RESULTS:



COURSE PROJECT BY:

M Krishna Vamshi Goud -19E51A0442

P Sanjana Reddy -19E51A0460

V Aravind Reddy -19E51A0480

EXIT TICKET:

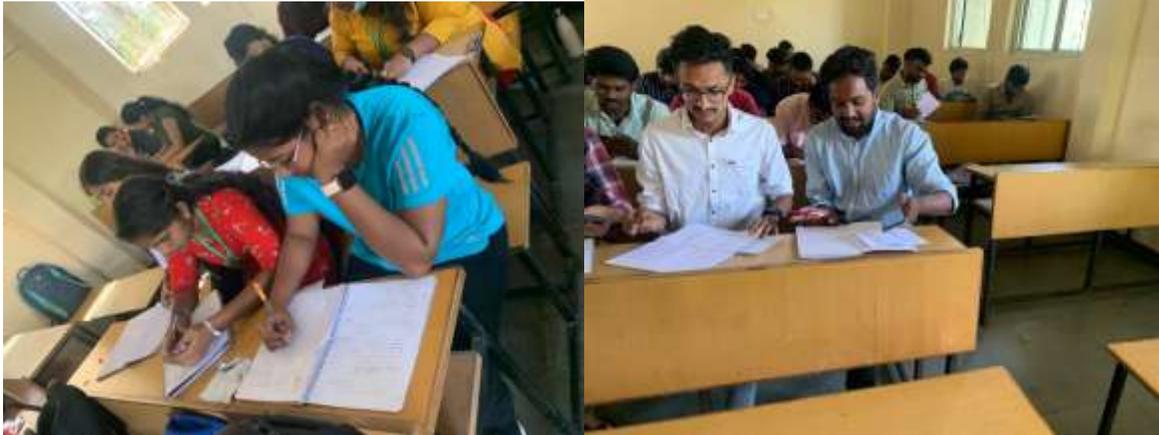
Introduction of the Pedagogy: After completion of the unit, students were asked to write any 3 questions on small piece of paper (Which is termed as Ticket), the ticket of each student is shared with other peers. The student who receives the questions should give answers for the same. 2 more iterations of ticket suffling happens in the class were students go through 10 important points in the corresponding topic/unit.

Expected outcome: Student recalls 10-15 important short answer questions through this activity.



Peer learning:

Peer learning is **the process of students learning with and from each other**. This is usually facilitated through teaching and learning activities such as student-led workshops, study groups, peer-to-peer learning partnerships, and group work. Active learners were identified to explain the concept to slow learners for better learning outcome.



E-RESOURCES/Textbooks Referred: Nil

Textbooks: Gonzalez

ICT USAGE: Nil

BEST Performer: ALL

Slow performers: 5

Suggestions given to Slow Learner: Personal counselling to motivate students for active participation

CHALLENGES:

Delay in submission

NO. OF STUDENTS PARTICIPATED: 75

STUDENT FEEDBACK:

1. Experiential Learning & Participative Learning

MODE OF FEEDBACK: ORAL



HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

DEPARTMENT OF ECE

A TECHNICAL REPORT

ON

PEDAGOGY IMPLEMENTED IN MOC

(For the Academic year 2022-23)

Name of Activities:

- 1) Poster Presentation**
- 2) Exit ticket**
- 4) PIC mania**
- 5) Learning through animation videos**
- 6) Others**

Year/Branch: IV B. Tech I Semester ECE Section A

Prepared by: Dr. B.Lokeswara Rao

Professor of ECE & Dean Freshman

HYDERABAD INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Gowdavelli, village Medchal, Hyderabad-501401

POSTER PRESENTATION:

Introduction: A poster presentation is a formal, research-based presentation of the work. A poster presentation provides a visual representation of your research through text, charts, graphs, and other visual aids. A poster presentation allows viewers to read your research material at their own leisure and to interact with you—perhaps asking questions about your methods or your findings.

Topic: Optical Fiber Transmission Media

Unit No: 5

IMPLEMENTATION:

Students were formed into batches

- Each batch consists of minimum 1 student to maximum 4 students
- A review was scheduled, and presentations were delivered by the students
- The posters were submitted by respective batches
- Assessment was done based on the performance of the students

Criteria	Ratings	Points
Following the procedure	Clearly understood the procedure-3 Not followed the procedure properly-0	3
Cross checking with the team members and Group performance	Individually solving problem and discussion with peers-3 Individually solving problem without discussion-2 Not solving the problem-0	3
Subject knowledge	100% knowledge on presentation-5 80-90% knowledge on presentation-3 Below 80% (but followed procedure)-2 Below 80% (Not followed procedure)-0	5
Time management	Completion of the topic with clear understanding within given stipulated time -4 Clear understanding, not completed within the time limit-3 None-0	4





EXIT TICKET:

Introduction of the Pedagogy: After completion of the unit, students were asked to write any 3 questions on small piece of paper (Which is termed as Ticket), the ticket of each student is shared with other peers. The student who receives the questions should give answers for the same. 2 more iterations of ticket suffling happens in the class where students go through 10 important points in the corresponding topic/unit.

Expected outcome: Student recalls 10-15 important short answer questions through this activity.

Implementaion:

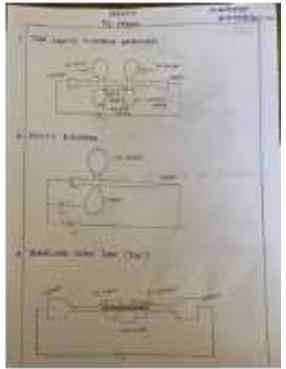
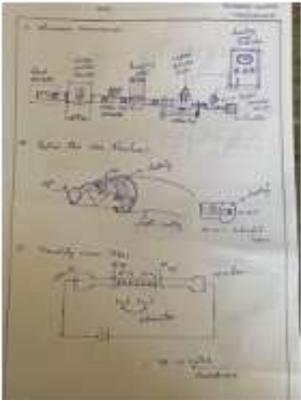
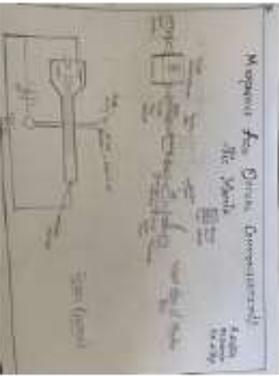
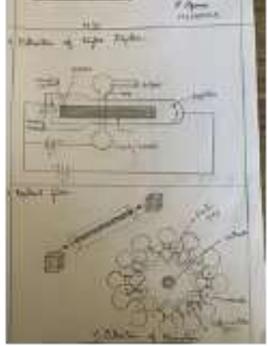
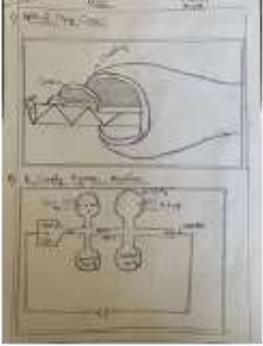
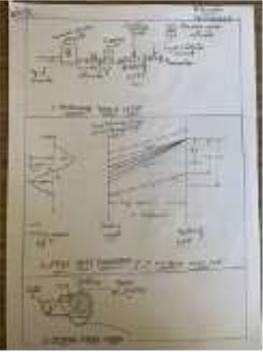


PIC mania:

Introduction: “ 1 Picture express 1000 words”

Based on this, students were asked to focus on the construction diagrams of microwave devices. The knowledge on the design of devices helps the students to write description and use of the device.





Outcome: Students practiced all the diagrams in the units and recalled them during the class that helped students to score the maximum marks.

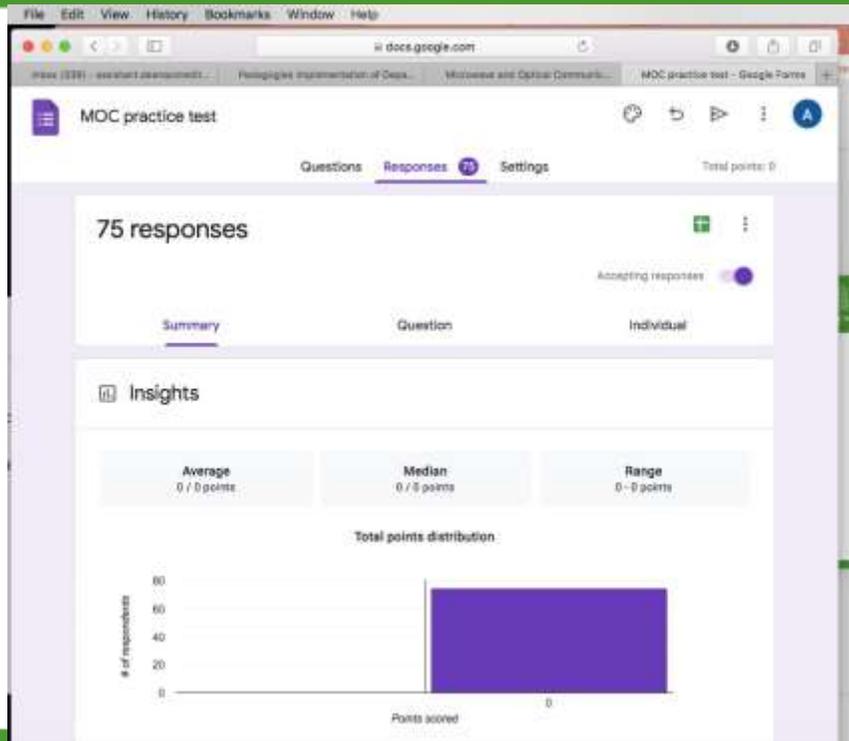
Learning through Animation Videos:



Outcome: The working principal of microwave devices can be easily understood through animation of working videos which were shown to the students in the class along with explanation through chalk and talk

Open Book Exam through google forms:

Open book exam through google forms



Outcome: Questions from all the units under Bloom's Level 3&4 were given in the form where students apply engineering knowledge in solving them.

Brain storming and peer learning:

E-RESOURCES/Textbooks Referred: Nil

Textbooks: Kulkarni

ICT USAGE: PROJECTOR

BEST Performer: ALL

Slow performer: Nil

Suggestions given to Slow Learner: Personal counselling to motivate students for active participation

CHALLENGES:

Delay in submission

NO. OF STUDENTS PARTICIPATED: 52

STUDENT FEEDBACK:

1. Experiential Learning & Participative Learning

MODE OF FEEDBACK: ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Electronic Devices and Circuits

II B.Tech ECE I Sem

AY:2022-23

Prepared by:

J. Rajeshwar Goud

Assoc. Prof.

Hyderabad Institute of Technology and Management

Gowdavelli,vill Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

The course handled is Electronics Devices and Circuits. I have conducted various activities in operating system course as mention below.

IMPLEMENTATION: Classroom activity for topic is well planned and executed as per schedule. Rubric designed to assist students performance.

Topic: Transistor Configurations

Pedagogies : Students presentation



Observation: Students actively involved in the class and taught to their friends. However academically week student learned but when it came to delivery on board most of them hesitated.

Impact: Approximately 70 % of the students prepared well to teach on the board. Students took responsibility to prepare material for assigned topic and share in the group

Activity: Slip Test



Observation: Students are writing the test.

Impact: By writing the test student get good marks in internal and External examinations. They understand the concepts easily by preparing for slip test. All the students including academically strong students are asked them to slip test.

Activity: Demonstration



Observation: Students and me enjoyed when I was teaching this concept.

Impact: Live demo besides problem solving helped students to understand complicated concept easily .I could see students laughing and learning at the same time. It helped the students to score better marks in the mid exams. Approximately 15 % of students including academically strong students missed vital points when asked them to write a few points about topic.

Activity: Real time Examples

Evolution of Electronic Devices



Observation: This activity helped me to check how many students understood topic clearly.

Impact:

- It helped the students to understand what is my expectation when they write answer.
- With real time examples students are easily understand the importance of Electronic Devices

E-RESOURCES/Texbooks Referred :

Link1:

TEXT BOOKS:

- Integrated Electronics, Jacob Millman, Christos C Halkias, McGraw Hill Education.
- Electronic Devices Conventional and current version -Thomas L. Floyd 2015, Pearson.

REFERENCE BOOKS:

- Electronic Devices and Circuits, David A. Bell – 5th Edition, Oxford.
- Electronic Devices and Circuits theory– Robert L. Boylestead, Louis Nashelsky, 11th Edition, 2009, Pearson

CONTENTS OUT OF SYLLABUS:

NIL

RUBRICS (if followed):

TIME TAKEN TO COMPLETE THE ACTIVITY: Regularly in the class after explaining the topic

BEST Performer: Akshitha

Slow performer: Vishnu Vardan

Suggestions given to Slow Learner:

CHALLENGES:

1. Irregularity of students
2. 21E51A0429
3. 21E51A0412

NO.OF STUDENTS PARTICIPATED: 2

NO.OF BATCHES MADE: Individual

STUDENT FEEDBACK:

1. Helped to understand the topic clearly

MODE OF FEEDBACK:

ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Microprocessor & Micro controller

III B.Tech ECE I Semester

AY: 2022-2023

Prepared by: CH SHANTHI

Hyderabad Institute of Technology and Management

Gowdavelli village, Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

These activity is conducted in the classroom only, these activities are how teachers teach in theory and in practice.

PROOFS:

Topic: Instruction format and Instruction set

Pedagogies : Seminar by Students



Observation: This activity is helpful to all students so that it will be useful for the students for preparation.

Outcome: With this activity students can learn the topic their own and deeply as well they removes stage fear also and improve presentation skills.

TOPIC: CORTEX processor & OMAP processor

Pedagogies : Guest Lecture



Observation: All students focused and interaction with guest faculty.

OUTPUT : Get new experiences and better opportunities to learn in different ways.

Topic: Microprocessor & Microcontroller

Pedagogies: Debate



Observation: Almost all students are participated with innovative thinking.

OUTPUT: This activity helped me to make students understand what the differences between 8086 & 8051 without any confusion.



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Name Of Activiy : Problem Solving

Course : Digital Logic Design

Name Of Topic: Logic gates using Universal gates

Year/Branch : II B.Tech I Semester ECE

Date of conduction : 06/02/2023

AY:2022-23

Prepared by: P SANTHOSH M.Tech., MIETE, (Ph.D.)

Assistant Professor (ECE)

Hyderabad Institute of Technology and Management

Gowdavelli,vill, Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

The Problem Solving activity is conducted in the classroom only. One day before I divided entire class into groups as per their lab batch. In this activity, for every batch I provided a set of problems (this activity is conducted on counter design), each batch done the solution for the problems by discussing with their batch mates.

IMPLEMENTATION:

- One day before I gave the set of problems to the students that is Counter Design examples.
- In this activity I will call randomly any student, he/she has to come and explain the given counter design problem to their classmates.

PROOFS:



Fig. Student Seminar

OUTCOME:

With this activity students can learn the topic deeply as well it will improve communication skills and removes stage fear also.

CHALLENGES:

1. Require support of another faculty.

NO.OF STUDENTS PARTICIPATED: 59

STUDENT FEEDBACK:

1. More active to participate in the activity
2. feels more satisfactory with outcome of activity

MODE OF FEEDBACK: ORAL



A TECHNICAL REPORT ON PEDAGOGY IMPLEMENTED

Name Of Activity : Missing steps and problem solving

Course : Signals and Systems

Name Of Topic: Laplace Transforms

Year/Branch : II B.Tech I Semester ECE

Date of conduction : 24/01/2023

AY:2022-23

Prepared by: Mrs.K Bindu Madhavi

Associate Professor (ECE)

Hyderabad Institute of Technology and Management

Gowdavelli,vill, Medchal, Hyderabad-501401

INTRODUCTION ON PEDAGOGY:

Missing Steps and Problem solving helped the students to remember the formulae, properties and steps to find the solution of a problem very easily.

IMPLEMENTATION:

- Formed the team of three members
- Each team will be given the analysis with missing formula or design steps
- Time :20 mnts
- With in the time they need to Complete the circuit and these papers will be interchanged with the other batches
- They will award the marks with the rubrics given by me
- Finally it will be checked for one more time by me and the marks will be revealed in the Whatsapp Group

PROOFS:



Fig 1. Problem Solving

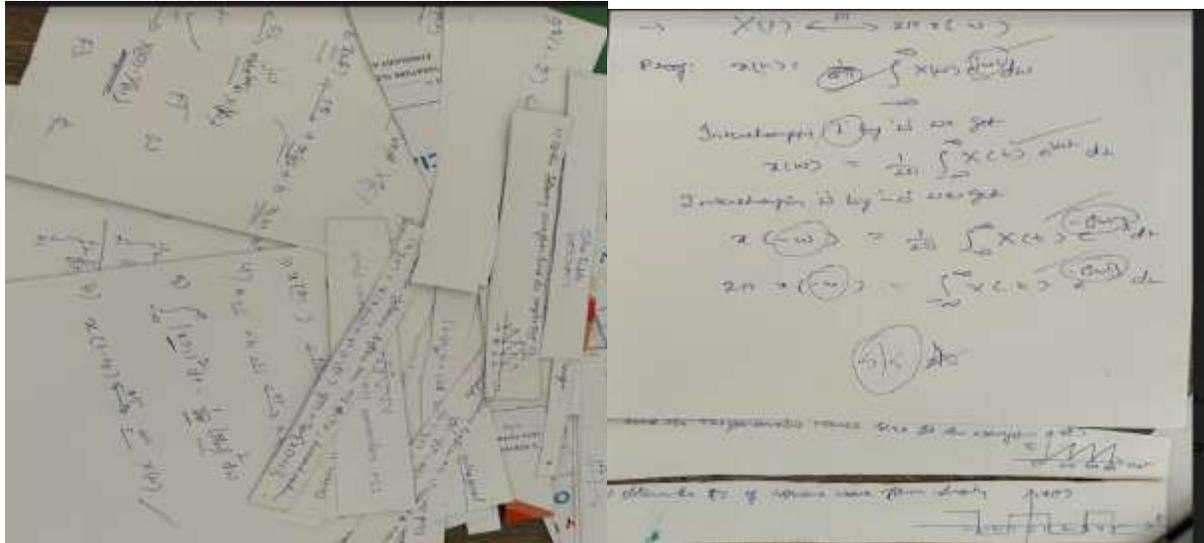


Fig 2. Missing steps and problems

OUTCOME:

With this activity students can learn the topic deeply as well it will improve confidence on subject and hence to improve pass percentage.

CHALLENGES:

No Challenges

NO.OF STUDENTS PARTICIPATED: 43

STUDENT FEEDBACK:

1. More active to participate in the activity
2. feels more satisfactory with outcome of activity

MODE OF FEEDBACK: ORAL