Department of Electronics and Communication Engineering
Academic Year 2024 – 2025 (Odd Semester)

Degree, Semester & Branch: III semester B.E. ECE A
Course Code & Title: EC3351 Control Systems
Name of the Faculty member (s): P.Venkatesh

Innovative Practice Description

- **Unit / Topic: IV** / Concepts of Stability Analysis
- **Course Outcome:** CO4
- **Topic Learning Outcome:** 14
- **Activity Chosen:** Jigsaw
- **Justification:**
  The Jigsaw Strategy is an efficient way to learn the course material in a cooperative learning style. The jigsaw process encourages listening, engagement, and empathy by giving each member of the group an essential part to play in the academic activity. Group members must work together as a team to accomplish a common goal each person depends on all the others.
- **Time Allotted for the Activity:** 45 minutes
- **Details of the Implementation:**
  The lessons are divided into subcategories. Students are divided into groups of four or five students. Then each small group would be created with one student receiving one Subcategory of the lesson. For this method, each small group gets the same set of Subcategories. Once individuals have researched their own subcategory, they will meet with individuals from the other small groups with the same topic to better develop their understanding and become experts of the subcategory. Each student would then return to their original group and teach their subcategory to the rest of their small group.
- **CO – PO / PSO mapping:**

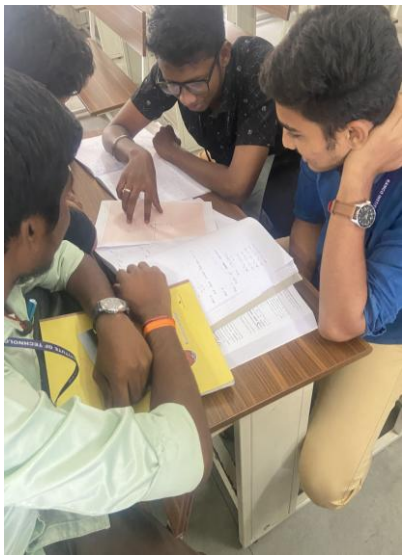
CO	PO1	PO2	PO8	PO9	PO10
CO1	2	3	2	3	3

- **PO / PSO mapped:**

Innovative practice	PO1	PO2	PO8	PO9	PO10
	2	3	2	3	3
Justification for correlation	Analysing stability requires the knowledge of engineering fundamentals such as representation	The course outcome is highly correlated, since identification of mathematical	Identify tenets of the professional code of ethics while doing activity-based	A Collaborative activity – Jigsaw helps the students to Present results as a team, with	The topics deals with presentations of waveguide. This task is accomplished through Jigsaw

	of numbers and the order This course outcome is moderately correlated.	and engineering knowledge to solve problems related to root locus	learning. So, it is moderately correlated.	smooth integration of contributions from all individual efforts. The course outcome is highly correlated.	activity therefore course outcome is correlated highly.

- **Images / Screenshot of the practice:**



- **Reflective Critique:**
  - ***Feedback of practice from students and other stakeholders:***
    Students feel that it was interesting. They learn how to communicate with team members and work together.
  - ***Benefit of the practice:***
    Every student got equal opportunity to come forward to take part in this activity. The success of the activity was evaluated by asking the same question in Internal Assessment test II – Around 80% of students answered correct

References:

- https://www.educationworld.com/a_curr/strategy/strategy036.shtml
  https://www.teachhub.com/teaching-strategies/2016/10/the-jigsaw-method-teaching-strategy/

Signature of the Faculty member **HOD**

Department of Electronics and Communication Engineering
Academic Year 2023 – 2024 (Even Semester)

Degree, Semester & Branch: II semester B.E. ECE B
Course Code & Title: EC3251 Circuit Analysis
Name of the Faculty member (s): P. Venkatesh

Innovative Practice Description

- **Unit / Topic:** Unit V / COUPLED CIRCUITS AND TOPOLOGY
- **Course Outcome:** CO 5
- **Topic Learning Outcome:** TLO28
- **Activity Chosen:** Flipped Classroom
- **Justification:**

It allows students to learn in their own pace, it encourages students to actively engage with lecture material, it frees up actual class time for more effective, creative and active learning activities and students take control and responsibility for their learning. Also the practice was chosen because the topic is simpler and interesting for the students to refer and learn by themselves

- **Time Allotted for the Activity:** 45 minutes
- **Details of the Implementation:**

  Specific topic was given to the students learn on their own. Resources like reference book, videos were given to the students. Apart from this they can refer any other relevant source for preparation. Students are asked to prepare more in depth than before. Students are separated into groups where students are given a specific topic to prepare and present. Get the class back together to share the individual group's work with everyone.

- **CO – PO / PSO mapping:**

CO	PO1	PO3	PO8	PO9	PO10
CO5	3	2	1	1	1

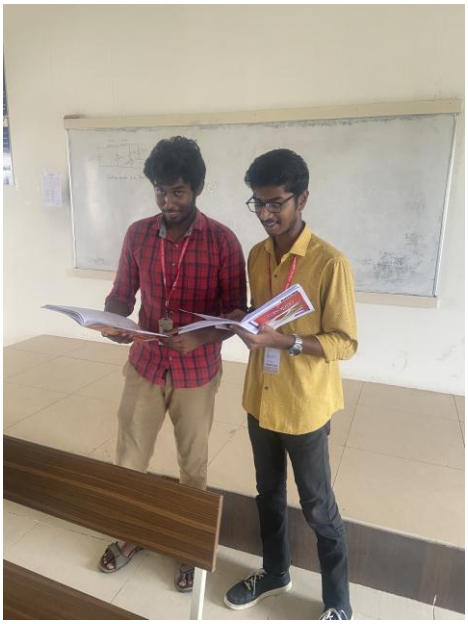
(1 – Low 2 – Moderate 3 – High)

- **PO / PSO mapped:**

Innovative practice	PO1	PO3	PO8	PO9	PO10
	3	2	1	1	1
Justification for	Solve problems in	PO3 is moderately mapped with	Identify tenets of the	It helps the students to	The students will present the

correlation	topics nodal analysis using cut set and hence PO1 has been mapped strongly to level 3	level 2 because students will build new method for current analysis using cut set schedule	professional code of ethics while doing activity based learning. So, it is mapped at level 2	present the topic of discussion as a team, with smooth integration of contributions from all individual efforts. So, it is mapped at level 2	results and conclusions of the activity carried out in front of the class which require good communication and presentation skills and so PO 10 is mapped

- **Images / Screenshot of the practice:**



- **Reflective Critique:**
  - ***Feedback of practice from students and other stakeholders:***
    - Students feel that they have improved self-learning.
    - They learn how to communicate with team members and work together.
    - They were completely involved
  - ***Benefit of the practice:***
    - Every student got equal opportunity to come forward to take part in this activity.
    - They felt easy in solving level 3 questions in Assignments and Internal Assessment test

- The success of the activity was evaluated by asking the same question in Internal Assessment test II – Around 80% of students answered correct

- ***Challenges faced in implementation:***
  - Few students hesitated to come forward to present the results and conclusions of the disscussion
  - The main challenge faced is that few students not exposed to flipped class room.

References:

- https://www.teachthought.com/learning/a-flipped-classroom/
- Bergmann, J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. Eugene, Or: International Society for Technology in Education.

Signature of Faculty Member **HOD**

RAMCO INSTITUTE OF TECHNOLOGY

Department of Electronics and Communication Engineering

Academic Year: 2024 - 2025 (Odd Semester)

Active Learning Practices

Degree, Semester& Branch: III Semester B.E.ECE A
Course Code & Title: EC3351 Control Systems
Name of the Faculty member: P.Venkatesh

UNIT I - System Components and their Representation
Activity: One minute paper **Topic:** Signal flow graphs models, Problems in Signal Flow Graph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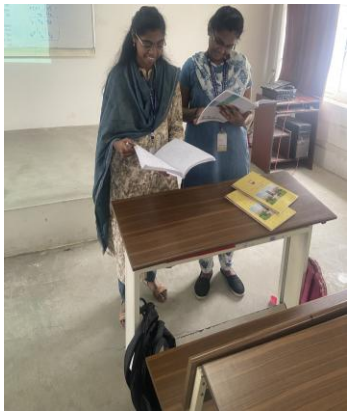
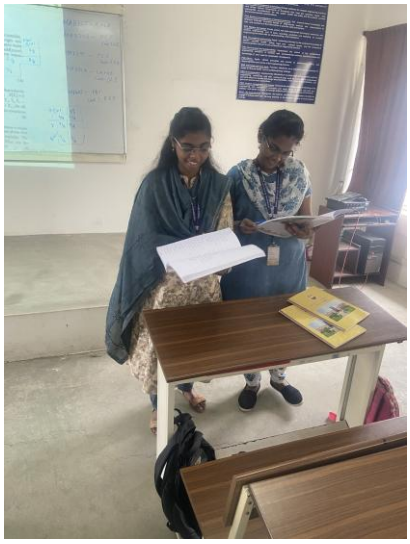
RAMCO INSTITUTE OF TECHNOLOGY

Department of Electronics and Communication Engineering

Academic Year: 2024 - 2025 (Odd Semester)

Active Learning Practices

Degree, Semester& Branch: III Semester B.E.ECE A
Course Code & Title: EC3351 Control Systems
Name of the Faculty member: P.Venkatesh

UNIT IV - Concepts of Stability Analysis	
Activity: Zero minute speech **Topic:** Introduction to Routh stability criterion	
	

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RAMCO INSTITUTE OF TECHNOLOGY

Department of Electronics and Communication Engineering

Academic Year: 2024 - 2025 (Odd Semester)

Active Learning Practices

Degree, Semester& Branch: V Semester B.E.ECE B

Course Code & Title: EC3551 Transmission Lines and RF Systems

Name of the Faculty member: P.Venkatesh

UNIT I - TRANSMISSION LINE THEORY	
Activity: Class Poll **Topic:** Reflection coefficient and Input impedance in terms of Z0 & K