



## Department of Electrical and Electronics Engineering Academic Year 2022 – 2023 (Even Semester)

**Degree, Semester & Branch:** B.E, IV Semester & EEE

**Course Code & Title:** EE3403 & Measurements & Instrumentation

**Name of the Faculty member:** Mr. A. Guna, AP/EEE

### Innovative Practice Description

- **Unit / Topic:** Unit I / Elements of a Generalized measurement system

- **Course Outcome:** CO1

- **Topic Learning Outcome:** TLO2

- **Activity Chosen:** One minute paper

- **Justification:**

This topic is chosen, since it consists of complicated derivation and circuit diagram and problems. Since the upcoming concepts are interrelated to Instrument transformers, Student feedback on their understanding level about Instrument transformer is highly needed. Feedback of the Students who are hesitant to express their doubts can be easily known with the help of this activity

- **Time Allotted for the Activity:**

- 5 Minutes - Total time
- 2 Minute - Instruction about the activity
- 2 Minute -Time given for the students to complete
- 1 Minute - Collecting the paper

- **Details of the Implementation:**

The Purpose and Nature of the activity is explained to the students. Students were given 1 Minute of time to write in a piece of paper about the Concepts they have learnt in that day of class in few lines or points in bullet form. Papers are collected from the students and an assurance is given to the students that the concept will be discussed again in the next class.

- **CO – PO / PSO mapping:**

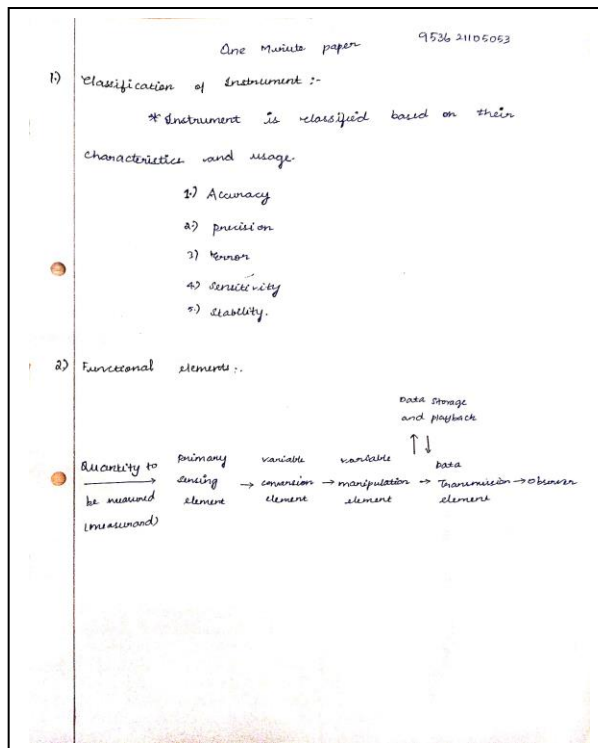
CO	PO1	PO3	PO10	PO12	PSO1
CO1	3	2	1	1	2

- **PO / PSO mapped:**

Innovative practice	PO1	PO3	PO10	PO12	PSO1
	3	2	1	1	2
<b>Justification for correlation</b>	Students will apply the knowledge of Electrical and Electronics engineering fundamental concepts to understand the basics of measurements and instruments	Students will determine the design objectives and functional requirements of the instruments and arrive at specification	Students will be able to produce clear, well-constructed written documents	Students will describe the rationale for the requirement for continuing professional development	Students able to analyze the performance of Electrical instruments by measured parameters

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





- **Reflective Critique:**

- ❖ **Feedback of practice from students and other stakeholders:**

The students enjoyed this One Minute Paper Activity. After the class many students requested me to insist other Course faculty members to conduct this activity. I have taken this feedback to by Head of the Department

- ❖ **Benefit of the practice:** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)

The students actively participated in the One-minute paper activity. As a teacher I could know the real students feeling, their understanding level from this activity. This greatly helped me to correct my flaws in my teaching process and able to find what are all the concepts I have to retake in the class.

- ❖ **Challenges faced in implementation:**

Still few students were hesitant to convey their points in paper. Few students have not taken this activity seriously and had given empty paper

References:

- ❖ <https://omerad.msu.edu/teaching/teaching-strategies/active-learning-strategies/27-teaching/184-visual-modeling-one-minute-paper>

Signature of Faculty Member

HOD



## Department of Electrical and Electronics Engineering Academic Year 2022 – 2023 (Even Semester)

**Degree, Semester & Branch:** B.E, IV Semester & EEE

**Course Code & Title:** EE3403 & Measurements & Instrumentation

**Name of the Faculty member:** Mr. A. Guna, AP/EEE

### Innovative Practice Description

- **Unit / Topic:** Unit I/ AC Bridges
- **Course Outcome:** CO3
- **Topic Learning Outcome:** TLO14
- **Activity Chosen:** Visual Quiz
- **Justification:**

There are totally 5 types of AC Bridge circuit and 4 types of DC bridge circuits given in the Course. Students find quite difficult to remember all those bridge circuits without revision. Rather than the traditional way of repeating the concepts in the class, this activity helped the students to revise all types of bridge circuit effectively.

- **Time Allotted for the Activity:** 25 minutes

- **Details of the Implementation:**

- The Purpose and Nature of the activity is explained to the students. The Study materials about the Types of AC bridges and DC Brides is already shared in Canvas
- ABC Category of students is already prepared (Never to be Circulated to Students) (A Category – Above 80% CGPA; B Category – Between 60 % to 80 % CGPA; C Category – Below 60 % CGPA). All the 64 Students is Divided into 3 Teams based on the ABC Category, each team will have 7 Students from A Category, 7 Students from B Category and 7 Students from C Category.
- Two rounds are conducted. First Round with 5 Questions (Medium Level) and Second round with 5 Question (High Difficulty). 2 minutes were given to each team to answer.
- In Round –I, for correct answer the team is given with 1 point, for wrong answer no mark is given, and the question passes to the next team, if answered correctly 0.5 marks were given. In Round –II, for correct answer the team is given with 2 point, for wrong answer no mark is given, and the question passes to the next team, if answered correctly 1 marks were given

- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO3	PO9	PO10	PSO1
CO1	3	2	1	1	1	2

- **PO / PSO mapped:**

<b>Innovative practice</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO9</b>	<b>PO10</b>	<b>PSO1</b>
	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>
<b>Justification for correlation</b>	Students will apply the knowledge of Electrical and Electronics engineering fundamental concepts to understand the basics of resistance, Inductance and capacitance	Students will identify the mathematical, engineering and relevant knowledge that helps to determine the value of unknown resistance, inductance and capacitance	Students will be determine the design objectives and functional requirements of the instrument and arrive at specification	Students will function effectively as team and as individual during this quiz	Students will be able to effectively communicate their answer orally through this quiz activity	Students able to analyze the performance of Electrical instruments by measured parameters

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





- **Reflective Critique:**

- ❖ ***Feedback of practice from students and other stakeholders:***

The students enjoyed the Verbal Quiz Activity. After the class many students requested me to conduct more such activities in future.

- ❖ ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)

The students actively participated in the verbal Quiz and they thoroughly enjoyed the session. This activity greatly helped to revise the concepts before the Internal Assessment Test -1 Exam. I Could able to completely involve most of the students in the learning process

- ❖ ***Challenges faced in implementation:***

Few students have not much interest in attending the Verbal quiz. The Planned time to conduct this activity is 25 Minutes, but this activity took 35 minutes for me to complete since I am implementing this for the first time.

- **References:**

- ❖ **<https://omerad.msu.edu/teaching/teaching-strategies/active-learning-strategies/27-teaching/184-visual-modeling-one-minute-paper>**

**Signature of Faculty Member**

**HOD**



## Department of Electrical and Electronics Engineering

Academic Year 2022 – 2023 (Even Semester)

Degree, Semester & Branch: B.E, IV Semester & EEE

Course Code & Title: EE3403 & Measurements & Instrumentation

Name of the Faculty member: Mr. A. Guna, AP/EEE

### Innovative Practice Description

- **Unit / Topic:** Unit V / Introduction to Virtual Instrumentation
- **Course Outcome:** CO5
- **Topic Learning Outcome:** TLO26
- **Activity Chosen:** Flipped Classroom
- **Justification:**

This topic is chosen, since it can be easily understood by students. Students can improve their understanding on this topic by this activity. More time for discussion is given the class unlike traditional learning. This activity greatly helps the student to know the concept much deeper.

- **Time Allotted for the Activity:** 25 Minutes
- **Details of the Implementation:**

Each team were asked to do literature survey about the given topic. They should include at least 5 Reference material about the given topic for which the material is already shared. Students in a team were asked to present their topic through power point presentation. Queries will be asked by the students to the presenting team

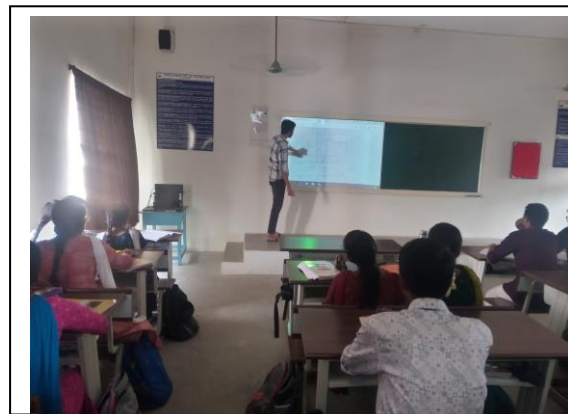
- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO9	PO10	PSO1
CO1	3	2	1	1	2

- **PO / PSO mapped:**

Innovative practice	PO1	PO3	PO9	PO10	PSO1
	3	2	1	1	2
<b>Justification for correlation</b>	Students will apply the knowledge of Electrical and Electronics engineering fundamental concepts to understand the basics concept of digital instrumentation	Students will determine the design objectives and functional requirement of the instruments and arrive at specification	Students function effectively as team and as an individual in this activity	Students will be able to effectively communicate their ideas in this activity	Students able to analyze the performance of Electrical instruments by measured parameters

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



- **Reflective Critique:**

- ❖ ***Feedback of practice from students and other stakeholders:***

The students enjoyed this Flipped classroom Activity. After the class many students requested me to insist other Course faculty members to conduct this activity. I have taken this feedback to by Head of the Department

- ❖ ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)

The students actively participated in the flipped classroom activity. As a teacher I could know the real students feeling, their understanding level from this activity. This greatly helped me to clear all the student doubt and make them more involved in the learning process

- ❖ ***Challenges faced in implementation:***

Still few students were hesitant to convey their points and queries. Few students have not taken this activity seriously and remain quite in the class

References:

- ❖ <https://www.panopto.com/blog/7-unique-flipped-classroom-models-right/>

**Signature of Faculty Member**

**HOD**