



VIGNAN'S

INSTITUTE OF INFORMATION TECHNOLOGY
(AUTONOMOUS)

(Approved by AICTE - New Delhi & Affiliated to JNTUK, Kakinada)
Beside VSEZ, Duvvada, Vadlapudi Post, Gajuwaka, Visakhapatnam - 530 049.

Criteria – II – Teaching - Learning and Evaluation

Participative Learning Methods adopted in Teaching-Learning during 2020-21

S.No.	Method	Page No.s
1.	Innovative Teaching-Learning Methods	2-8
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PRINCIPAL
VIGNAN'S INSTITUTE OF
Information Technology (A)
Beside: VSEZ, Duvvada, Visakhapatnam-49



Criteria – II – Teaching - Learning and Evaluation

Innovative Teaching-Learning Methods

Innovating in the teaching methods in the Engineering scope is a mandatory activity because practices and methodologies of the current educational systems are not suitable enough to support the learning needs of the knowledge society. Faculty members at VIIT are trained to implement diverse Teaching Methods.

Summary of number of courses and innovative teaching methods implemented

Program	CE	EEE	ECE	ME	ECM	CSE	IT	BS&H	MBA	MCA	Total
STAD	6	3	11	1	10	5	4	5	4	4	40
JigSaw	3	0	3	0	0	8	2	7	1	2	15
TPS	3	0	0	3	0	5	3	7	0	3	11
FSCR	3	7	1	5	9	1	6	7	6	6	32
ARCS	4	4	1	5	9	5	5	0	3	5	31
Seminar	17	12	9	14	10	1	8	9	8	8	71
Flipped Classroom	6	10	2	7	6	1	8	4	15	8	47
Case study	3	9	16	5	5	5	7	8	13	7	56
TEL	7	9	11	10	1	4	6	9	11	6	53
Open Book Exam	1	6	1	2	5	5	2	5	4	2	24
Game Based Learning	3	0	1	0	1	5	2	0	1	2	11
Total	56	60	56	52	56	45	53	61	66	53	558



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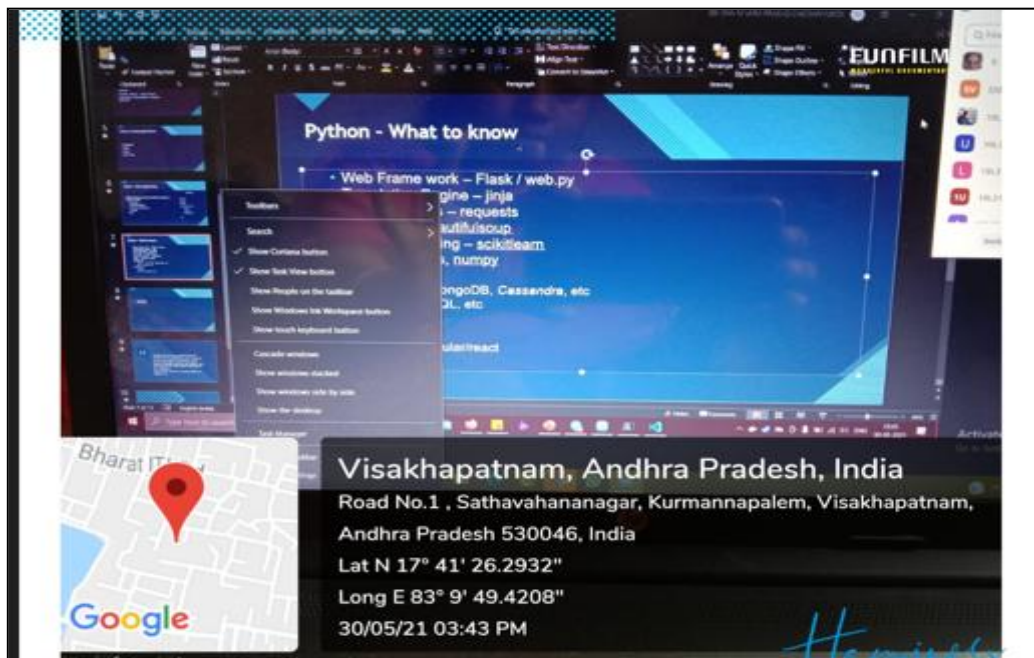
Student Team Achievement Division (STAD) for Non-Destructive Evaluation course



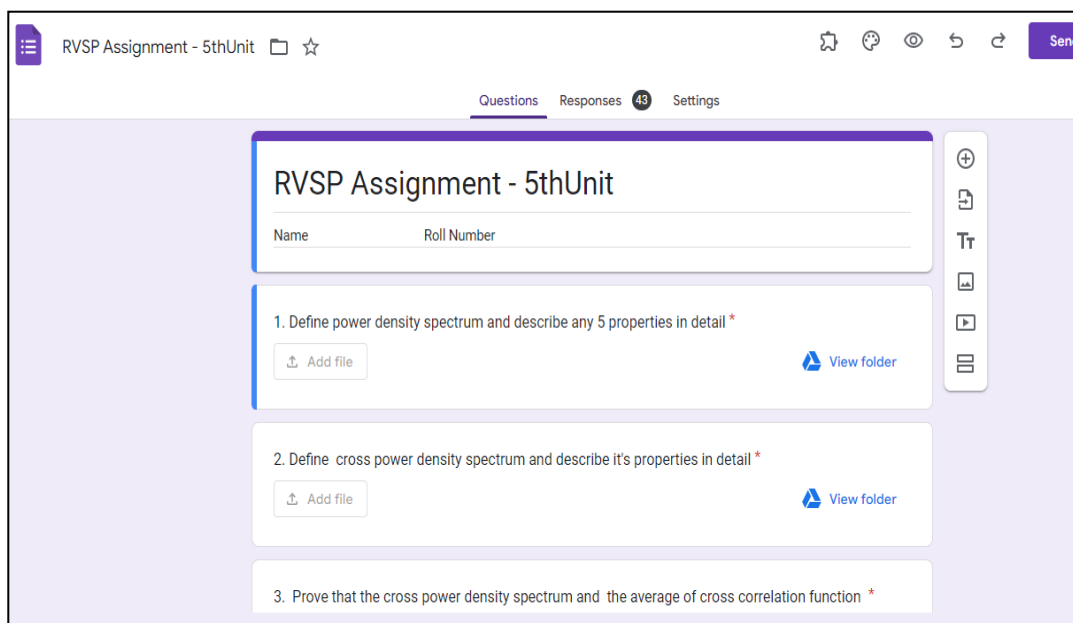
Formulate-Share-Create-Revise (FSCR) Method for Operations Research course



Criteria – II – Teaching - Learning and Evaluation



Online seminar mode for PYTHON Programming course



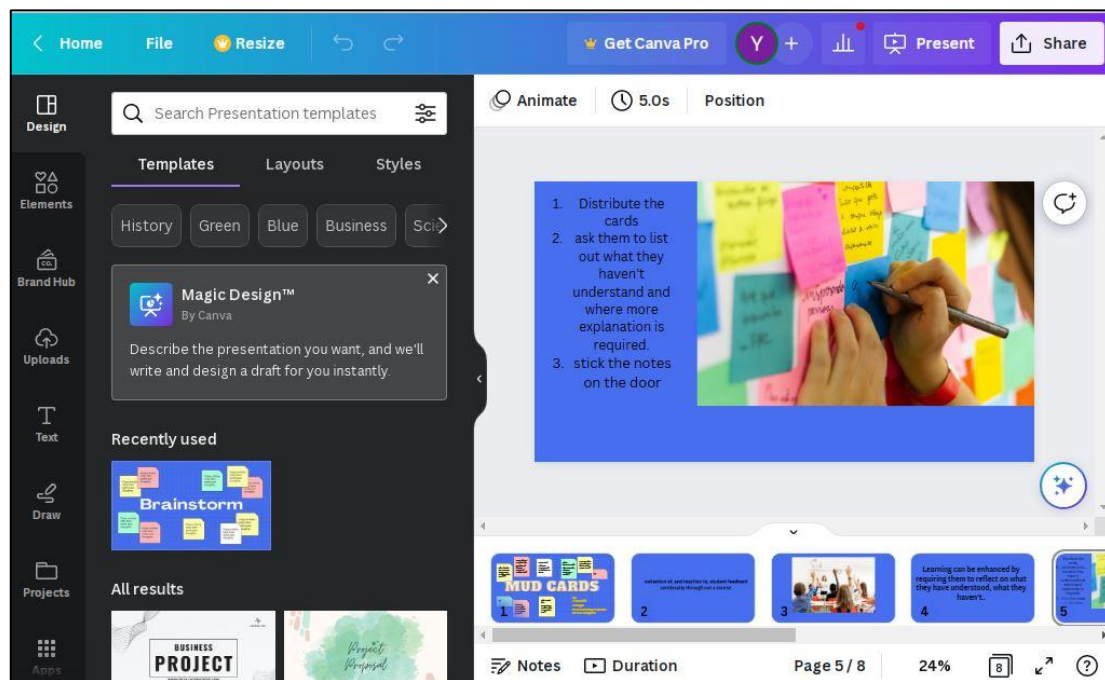
Technology Enabled Learning(TEL) for Random Variables and Stochastic Process Course



Criteria – II – Teaching - Learning and Evaluation



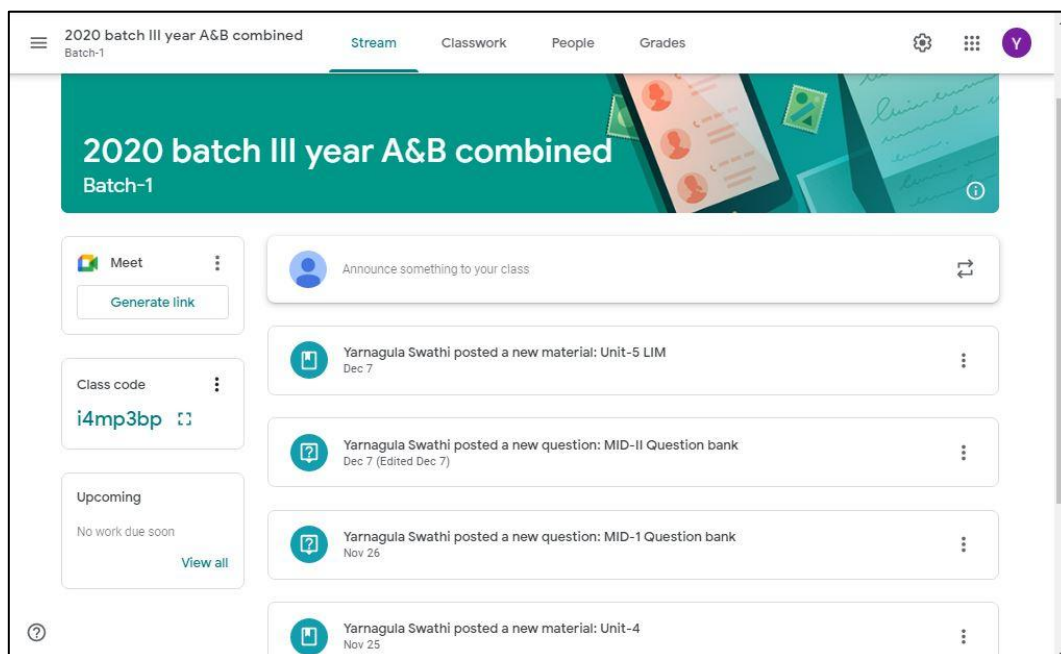
Open Book Exam (OBE) for Managerial Economics course



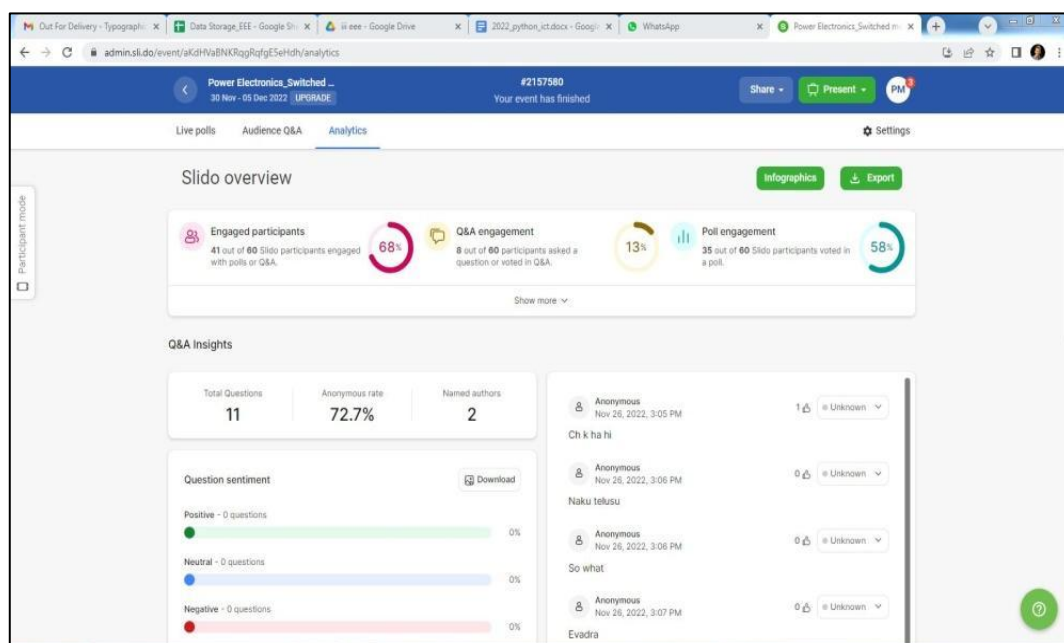
Canvas for Introduction to Python course



Criteria – II – Teaching - Learning and Evaluation



Google classroom for Special Electrical Machines course



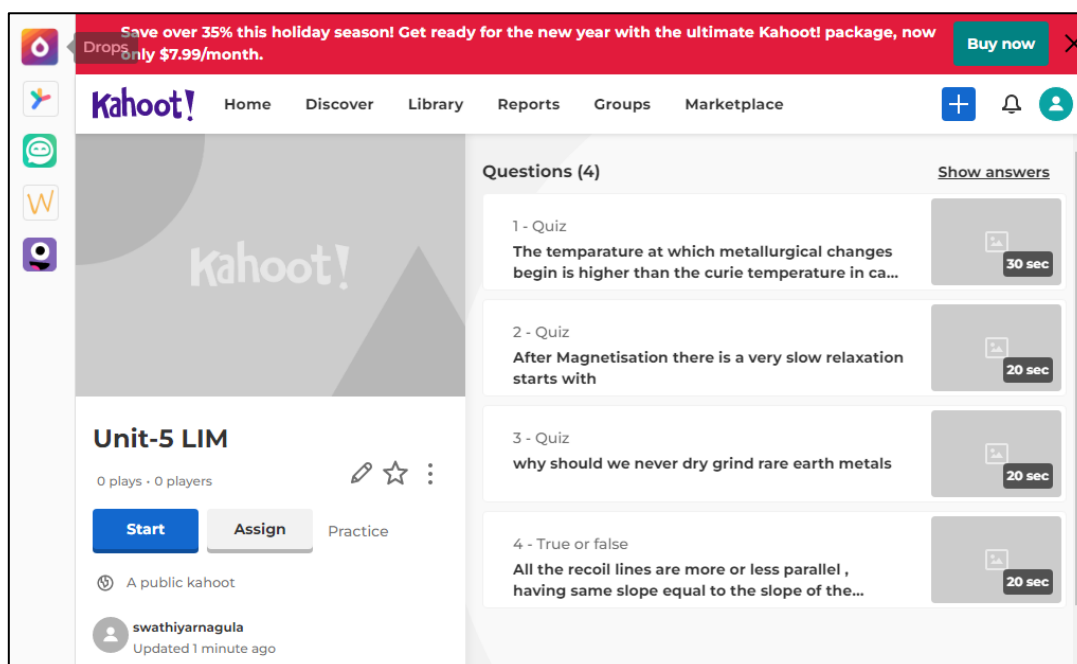
Slido for online quiz in Power Electronics course



Criteria – II – Teaching - Learning and Evaluation



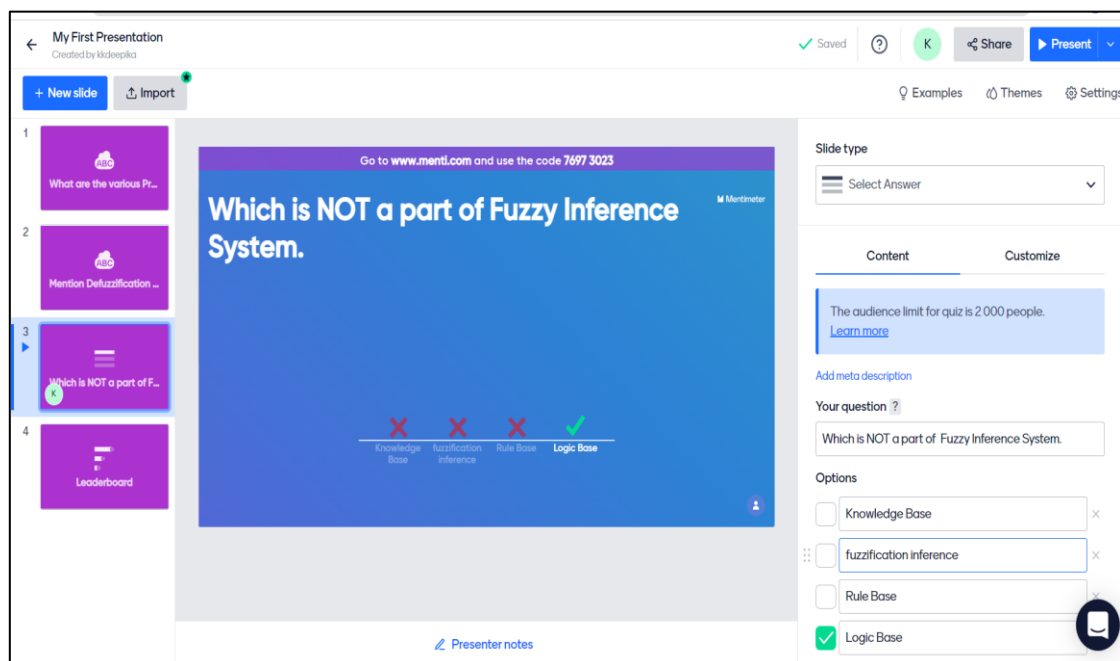
Assessment through **Quizziz** for Python course



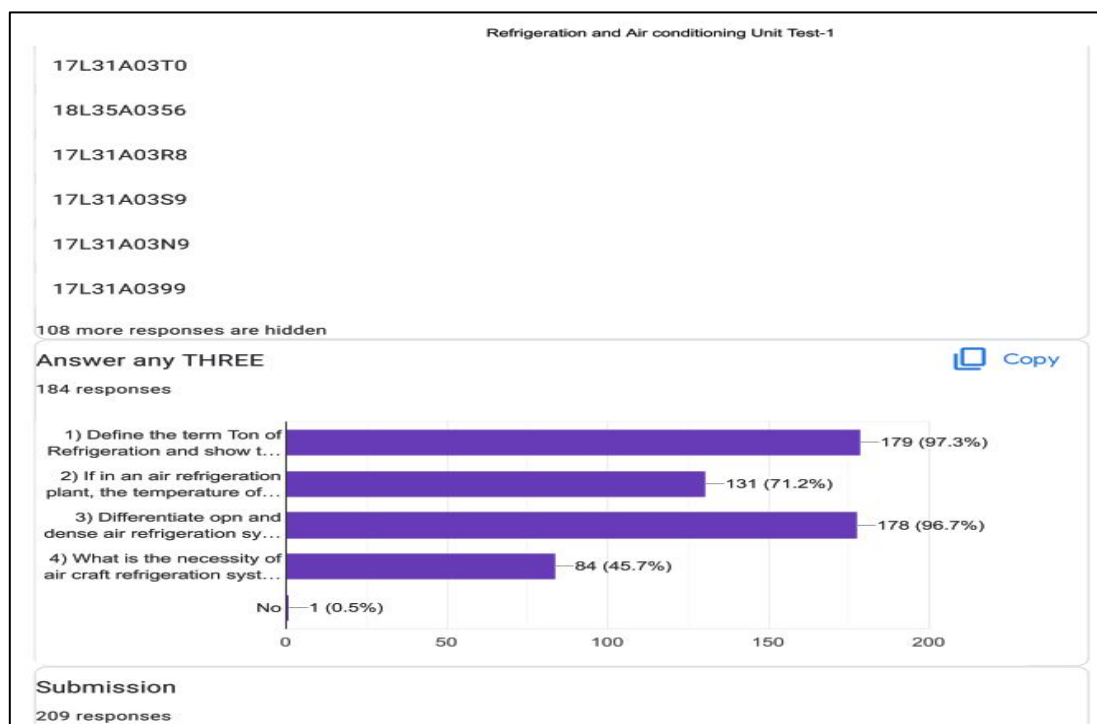
Kahoot for assessment in Special Electrical Machines course



Criteria – II – Teaching - Learning and Evaluation



Mentimeter in>NNFL course



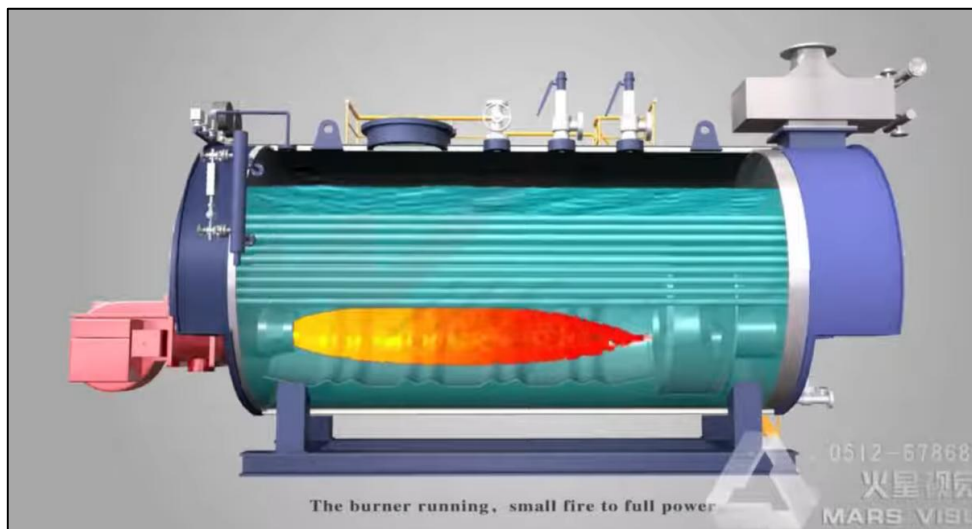
Google form for an online quiz in Refrigeration & Air-Conditioning course



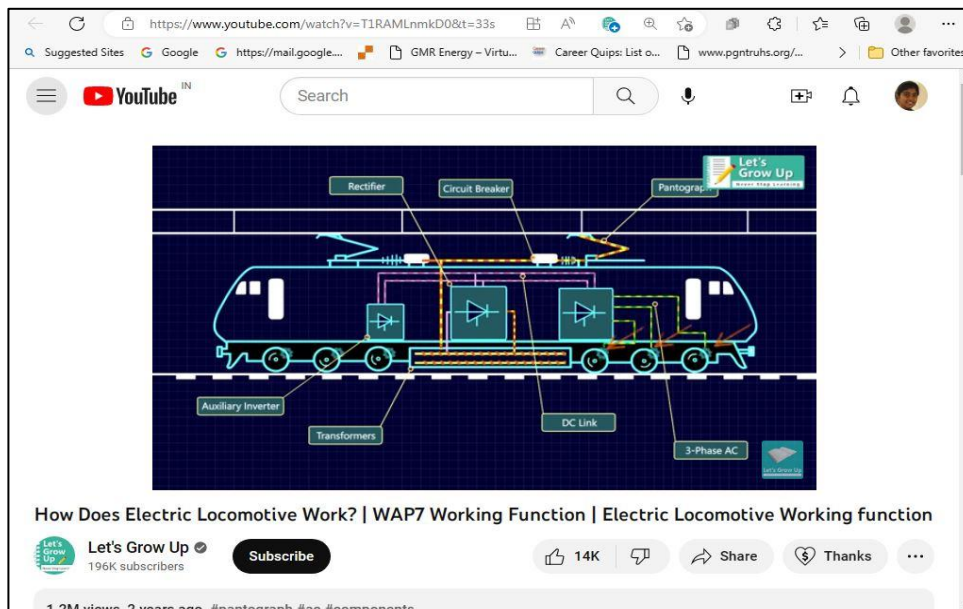
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Interactive Instructional Strategies

Faculty integrate multimedia usage (audio, video, animation softwares, etc.) to enhance their digital presentations for effective teaching. A few are:



Instruction through animations for Applied Thermodynamics – I Course



Instruction through video Lecture for UEE courses



Criteria – II – Teaching - Learning and Evaluation



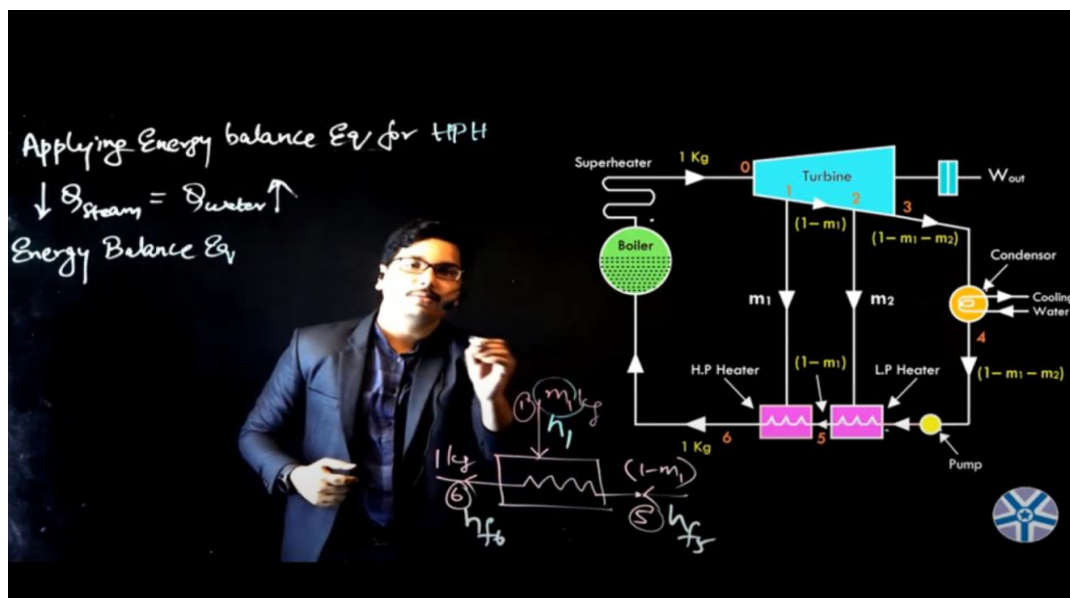
Instruction through **Video Lecture** for Digital Electronics course



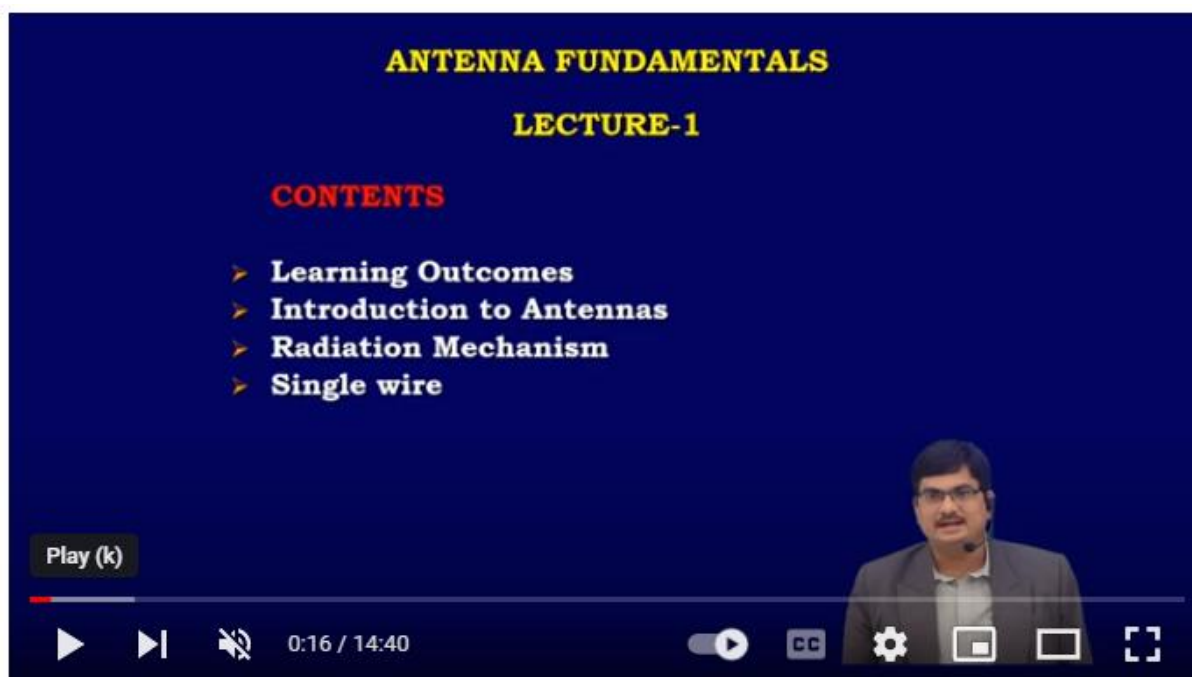
Instruction through **ICT classroom and Labs** for Special Electrical Machines course



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Instruction using **Glassboard** for Thermal Engineering-II course



Instruction using **Smart boards** for Antennas and Wave Propagation course



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Topic: Problems on Rankine Cycle Course: Thermal Engineering - II

Problem: In a steam power cycle, the steam supply is at 15 bar and dry and saturated. The condenser pressure is 0.4 bar. Calculate the Carnot and Rankine efficiencies of the cycle. Neglect pump work.

Sol) Given data,
 $P_1 = 15 \text{ bar}, x_1 = 1$
 $P_2 = 0.4 \text{ bar}$
 $\eta_{\text{Carnot}} = ?$ $\eta_{\text{Rankine}} = ?$
 $\eta_{\text{Carnot}} = \frac{T_1 - T_2}{T_1}$

Department of Mechanical Engineering Slide No: 1

Instruction through **Graphic Tablet** for Thermal Engineering-II course

Untitled Jam

AB = Connecting rod
= 600 mm = 0.6 m

OB → Crank = 150
= 0.15 m

⇒ Angular velocity of Crank, $N_{BO} = 300 \text{ rpm}$

$\omega_{BO} = \frac{2\pi N_{BO}}{60}$
 $= \frac{2\pi \times 300}{60}$
 $= 31.4 \text{ rad/s}$

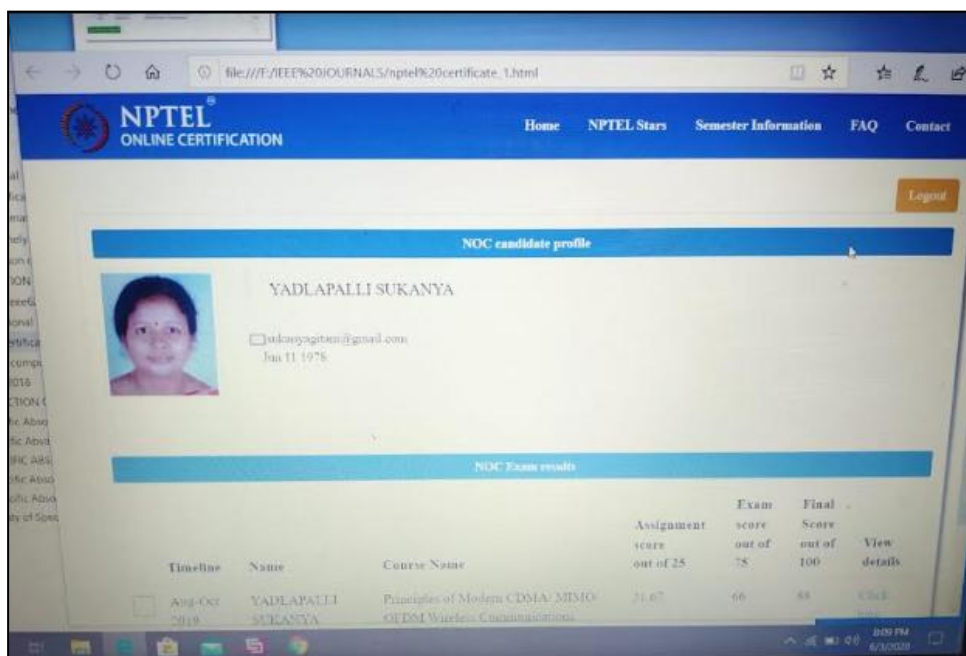
$v_{BO} = 0.15 \times 31.4$
 $= 4.71 \text{ m/s}$

$v = r\omega$

Instruction through **Google Meet (Jam Board)** for the Kinematics of Machinery course



Criteria – II – Teaching - Learning and Evaluation



Technology enabled learning- Faculty registered in swayam/E-Pathshala



Technology enabled learning- Faculty registered for online FDPs: Andhra Pradesh State Skill Development Corporation sponsored by Department of Science & Technology (Government of India)



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Online Certification Courses

Advanced learners register and receive certificates for courses by NPTEL, COURSERA, UDEMY, etc..to improve academic performance.



Certification through NPTEL



Certification through COURSERA



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HR Generalist Certification Program



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Expert Lectures

- All departments of VIIT organize expert lectures on recent technologies to enrich the knowledge of students and researchers.
- These provide a platform for students, researchers and faculty members to share their ideas and innovations. Entrepreneurs and distinguished professionals from various Government organizations, reputed institutions and industries are regularly invited as resource persons.



Guest lecture on “Recent trends in metal Additive Manufacturing” by Prof. K Venkata Rao, Vignan’s Foundation for Science Technology and Research on 6th January 2021 for III & IV ME Students and Faculty members.



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Re-accredited by NAAC with 'A' Grade (CGPA of 3.4/4.00)
DUVVADA, VISAKHAPATNAM

Webinar on
ADVANCED DC-DC CONVERTERS USED IN POWER ELECTRONICS APPLICATIONS

SPEAKER
Dr. OBBU CHANDRASEKHAR
Associate Professor, NIT Srinagar

Date & Time
06th July 2021 (Tuesday) 11:00 AM TO 1:00 PM

For any query Contact
Mr. K. Sravan Kumar
Dr. Madisa V G Varaprasad viteeewebinars@gmail.com

Organised by: Department of ELECTRICAL & ELECTRONICS ENGINEERING
In Association with INDIAN SOCIETY FOR TECHNICAL EDUCATION, VISAKHAPATNAM

Major Problems to be solved with Proposed Integrated Converter:

- Wide voltage conversion range $M(d_i)$ [24] with better duty ratio (d_i)
- Reducing the size and voltage rating of the intermediate bus capacitor which reduces the switching voltage stresses, thereby decreasing the size of the converter [4],[11],[16]
- Implementation of Zero Current Switch Turn-on (ZCT) [14]
- Making capacitor and switching voltage stresses independent to load current variations [4], [14]
- Achieving high efficiencies and to make the converter design simple and flexible [4], [12], [13]

Visakhapatnam, Andhra Pradesh, India
Unnamed Road, Block D, Visakhapatnam, Andhra Pradesh
530049, India
Lat 17.71028°
Long 83.165813°
06/07/21 11:15 AM

Webinar on “Introduction to Advanced DC-DC Converters Used in Power Electronics Applications ” by Dr. Obbu Chandrasekhar, Associate Professor, Department of Electrical Engineering at NIT Srinagar on 6th July 2021 for III & IV EEE students and Faculty members.