

# MET's Institute of Engineering

## Bhujbal Knowledge City, Adgaon, Nashik

### Department of Electrical Engineering

### Innovative Teaching Learning Method

#### 1. Learning with YouTube

##### channel Objective:

To create classroom independent learning platform to remove hurdles in teaching learning processes.

To improve the performance of students by learning from anywhere with a digital platform.

To increase student engagement in learning process.

To improve learning outcomes and a more flexible teaching and learning environment.

##### Target Students:

**Table 1- Details about YouTube channel**

Classes	Topic/Subject	Name of Channel	Links
F.E.	Basic Electrical Engineering	<b>1. Electrical Urja</b> ( <a href="https://www.youtube.com/@ElectricalUrja">https://www.youtube.com/@ElectricalUrja</a> )	<a href="https://www.youtube.com/playlist?list=PLa_k_MFNH_crkrip2zQKFeKeDTo72ND5">https://www.youtube.com/playlist?list=PLa_k_MFNH_crkrip2zQKFeKeDTo72ND5</a>
T.E.	Electrical Machines-Transformer		<a href="https://www.youtube.com/playlist?list=PLa_k_MFNH_creoG55VszLAXrj01twjAY">https://www.youtube.com/playlist?list=PLa_k_MFNH_creoG55VszLAXrj01twjAY</a>
S.E., T.E., B.E.	Mostly asked Technical Interview Question		<a href="https://www.youtube.com/playlist?list=PLa_k_MFNH_comqmQsHQyuhfPXSJldGHJD">https://www.youtube.com/playlist?list=PLa_k_MFNH_comqmQsHQyuhfPXSJldGHJD</a>
S.E., T.E., B.E.	Competitive Examination Awareness- Study Question	Channel Enrichment: Subscribers=615 Total Videos=29	<a href="https://www.youtube.com/playlist?list=PLa_k_MFNH_cqmUlhU0_XpJBBp8RTXLNT8">https://www.youtube.com/playlist?list=PLa_k_MFNH_cqmUlhU0_XpJBBp8RTXLNT8</a>
S.E.	Network Analysis	<b>2. Electric Club</b> ( <a href="https://www.youtube.com/@electricclub5429">https://www.youtube.com/@electricclub5429</a> )	<a href="https://www.youtube.com/playlist?list=PLpR_8vcGv6UyqBkdZgGqJJH1F9Akse1hL">https://www.youtube.com/playlist?list=PLpR_8vcGv6UyqBkdZgGqJJH1F9Akse1hL</a>
T.E.	Power Electronics (Theory)		<a href="https://www.youtube.com/playlist?list=PLpR_8vcGv6UzPLkqBnEaj60lhVL18LHah">https://www.youtube.com/playlist?list=PLpR_8vcGv6UzPLkqBnEaj60lhVL18LHah</a>
T.E.	Power Electronics (Practicals / Experimentation)		Channel Enrichment: Subscriber=13 Total Videos=21

**Procedure:** A simplified video content is created for easy learning and

made available on YouTube platform for easy access to the students to revise and sharpen the basic concepts and improve the academic performance.

**Outcome:** Engagement of students increased over time. Flexible teaching and learning is achieved with flexible time to learn.

Channel 1 link: <https://www.youtube.com/@ElectricalUrja>



**Electrical Urja**

@ElectricalUrja · 615 subscribers · 29 videos

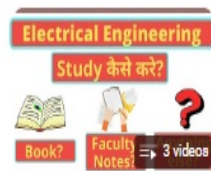
Hello YouTube family, I welcome you all to my channel "Electrical Urja". >

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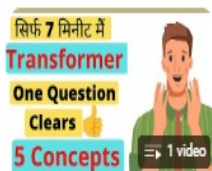
Sort by



Study Question  
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Electrical Interview Questions  
View full playlist



Transformer  
View full playlist



Basic Electrical Engineering  
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Activate Windows  
Go to Settings to activate Windows.

Channel 2 link: <https://www.youtube.com/@electricclub5429/playlists>



# Electric Club

@electricclub5429 · 13 subscribers · 21 videos

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Power Electronics

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Network Analysis

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## 2. Digital Classroom

### Objective :

1. To create an interactive learning environment for the interactive teaching learning process.
2. To increase student engagement in learning.
3. To improve the performance and involvement in the subject with the help of recent technologies, trends and development.
4. To create awareness about use of own ERP system for teaching learning process.

**Target Students:** F.E., S.E., T.E., B.E.

**Procedure:** The innovation work prepared by faculty is made available on the institute website [www.metbhujbalknowledgecity.ac.in](http://www.metbhujbalknowledgecity.ac.in). Innovation work includes teaching learning material prepared by faculty on their respective subject. ERP login is provided to every student and staff to access the innovation work.

### **i. ERP login to every student and staff (Link-<https://erp.metbhujbalknowledgecity.ac.in>)**

ERP System is implemented for the students and staff. Students are regularly accessing the information uploaded by the staff members. Students can check their attendance, download e-material, receive group messages, time table, exam time table etc. Also students submit feedback to teaching learning process through their ERP login. Various important links are provided to the students through this ERP login.

### **ii. Access of Teaching Learning material of Text/Audio/video type (Link-<https://erp.metbhujbalknowledgecity.ac.in>)**

All the teaching learning material like PDF, PPTs, Text files, Videos related to the subject are uploaded by respective staff on their ERP login. Students can access these materials through their login, download it and carry those for their reference.

**Table 2- List of material available on ERP system**

<b>Name of Faculty</b>	<b>Topic</b>	<b>Subject</b>	<b>Type of Content</b>
Mr. Ugale Kishor Tukaram	Study of Instrumentation amplifier using three Op-amp (Part 1)	Analog and Digital Electronics	Video
	Study of Instrumentation amplifier using three Op-amp (Part 2)	Analog and Digital Electronics	Video
Mr. Tushar M. Wadghule	Kelvin's Double Bridge	Electrical Measurement and Instrumentation	Video
	Measurement of active reactive method using one wattmeter method(two way switch)	Electrical Measurement and Instrumentation	Video
	Measurement of active reactive method using one wattmeter method(two way switch)	Electrical Measurement and Instrumentation	Video
	Measurement of power using two wattmeter method	Electrical Measurement and Instrumentation	Video
	Measurement of reactive power using one wattmeter method	Electrical Measurement and Instrumentation	Video
	power measurement using balance & unbalance load	Electrical Measurement and Instrumentation	Video
	Range extension of voltmeter using PT	Electrical Measurement and Instrumentation	Video
	Range extension using CT & PT	Electrical Measurement and Instrumentation	Video
Dr. Utkarsha L. Mohite	Dielectric properties of insulating material	Material Science	Text
	Insulating material	Material Science	Text
Mr. Mayur C. Parmale	Basic introduction to software and hardware	PLC and SCADA Application	Video
	Operation of counters	PLC and SCADA Application	Video
	Operation of logic gates	PLC and SCADA Application	Video
	Operation of timer	PLC and SCADA Application	Video
	Operation of time	PLC and SCADA Application	Video
	Set Reset operation	PLC and SCADA Application	Video
Mr. Ugale Kishor Tukaram	Induction Motor Drives-II	Advanced Electrical Drives & Control	Text
	PECD Unit 2 DC Motor Drives	Advanced Electrical Drives & Control	Text
	PPT of Unit 1 Electrical Drives	Advanced Electrical Drives &	Text

		Control	
Mrs. Kulkarni Kirti Shashank	Pq	Power Quality	Text
Mrs. Kulkarni Kirti Shashank	NMCP Notes	Numerical Method and Computer Programming	Text
Mr. Ugale Kishor Tukaram	Unit 1 Power Semiconductor Devices	Power Electronics	Text
	Unit 2 Transistor based Devices and DC-DC converter	Power Electronics	Text
	Unit 3 Single phase AC to DC converter	Power Electronics	Text
	Unit 5 Single Phase DC to AC converter	Power Electronics	Text

### 3. Summary of Innovation in Teaching Learning Process

**Table 3- Summary of innovative teaching learning process**

Sr. No.	Innovative Practice	Web Link
1	Use of Virtual Labs	1. <a href="https://www.vlab.co.in/">https://www.vlab.co.in/</a> 2. <a href="https://www.vlab.co.in/broad-area-electrical-engineering">https://www.vlab.co.in/broad-area-electrical-engineering</a> 3. <a href="https://vlab.amrita.edu/">https://vlab.amrita.edu/</a>
2	MET's ERP System	<a href="https://erp.metbhujbalknowledgecity.ac.in">https://erp.metbhujbalknowledgecity.ac.in</a>
3	Youtube Channel No. 1 (Electrical Urja)	<a href="https://www.youtube.com/@ElectricalUrja">https://www.youtube.com/@ElectricalUrja</a>
4	YOutube Channel No. 2 (Electric Club)	<a href="https://www.youtube.com/@electricclub5429">https://www.youtube.com/@electricclub5429</a>
5	Google Classroom	
6	Use of modern teaching aids like LCD projectors, information and communication Technology (ICT) Tools etc.	