



VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(An Autonomous Institution)

[Sponsored by Lavu Educational Society, Affiliated to JNTUH & Approved by AICTE, New Delhi]
Kondapur (V), Ghatkesar (M), Medchal - Malkajgiri (D) - 501 301. Phone: 96529 10002/3

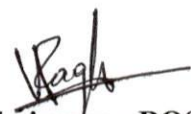


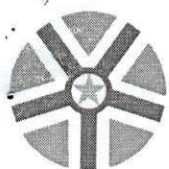
Department of Electrical and Electronics Engineering (Others)

2nd BoS Meeting on 19th August 2025

AGENDA

Item No.	Agenda Item
1.0	Review and Confirmation of Items
1.1	Review and confirmation of the Minutes of Meeting of the 1 st BOS Meeting held on 20 th December 2024.
1.2	Review of the VR 25 regulations.
1.3	Review and conformation of I B.Tech I & II Semester Course Structure.
2.0	Approval Items
2.1	Approval of Syllabus for I B.Tech I & II Semester.
3.0	Any other items with permission of Chair


Chairman - BOS
(Dr. V.Raghu Ram Prasad)



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Department of Electrical and Electronics Engineering (Others)

2nd BoS Meeting on 19th August 2025

Members Present:

S. No	Name of the Member	Designation	Organization	Role	Sign
1	Dr. V.Raghu Ram Prasad	Associate Professor	VMTW, Hyderabad.	BOS Chairman	
2	Dr.S.Tara Kalyani	Sr. Professor, Department of EEE Director of UIIC	JNTUH, UCESTH	JNTUH Nominee	
3	Dr. T. Anil Kumar	Professor, Department of EEE	Anurag University Hyderabad	Member (Academician)	
4	Dr. V. Srikanth	Assistant Professor & Associate Dean Academics	SR University, Warangal	Member (Academician)	
5	Mr. M. Nageshwar	MRT/SD-1/Metro- East	TG TRANSCO Hyderabad	Member (Industry)	
6	Mr. L. Kiran Kumar	Assistant Professor	VMTW, Hyderabad.	Member	
7	Mr. M. Bhoja Raju	Assistant Professor	VMTW, Hyderabad.	Member	
8	Mrs. J. Ashok Kumar	Assistant Professor	VMTW, Hyderabad.	Member	
9	Dr. R. Sridhar	Associate Professor & HOD- BSH	VMTW, Hyderabad.	Special Invitee	

MINUTES BOOK

Vignan's Institute of Management & Technology for Women **(An Autonomous Institutions & Accredited by NBA & NAAC)**

Minutes of the 2nd Board of Studies (BoS) meeting held on 19th August 2025, 11.00AM at
HOD'S Chamber, VMTW

The Quorum (minimum 40%) was satisfied.

The following members were present:

1. Dr. V.Raghu Ram Prasad
2. Dr. S.Tara Kalyani
3. Dr. T. Anil Kumar
4. Dr. V. Srikanth
5. Mr. M. Nageshwar
6. Mr. L. Kiran Kumar
7. Mr. M. Bhoja Raju
8. Mrs. J. Ashok Kumar
9. Dr. R. Sridhar

The Chairman welcomed all the members to the meeting of the Board of Studies.

Proceedings of the meeting of the Board of Studies

1.0 Review and Confirmation of Items.

1.1 Review and confirmation of the Minutes of Meeting of the 1st BOS Meeting held on 20th December 2024.

The Chairman-BOS present the minutes of Meeting of the 1st BOS meeting held on 20th December 2024

The Board reviewed and confirmed the Minutes of the Meeting of the 1st BOS Meeting held on 20th December 2024.

1.2 Review of the VR 25 regulations.

The Chairman-BOS present the VR 25 regulations.

The Board reviewed and noted.

1.3 Review and conformation of I B.Tech I & II Semester Course Structure.

The Chairman-BOS present the proposed Course Structure (Annexure -1) to the members.

The Board has reviewed and confirmed the Course Structure.

2.0 Approval Items

2.1 Approval of Syllabus for I B.Tech I & II Semester.

The Chairperson presented the Syllabus ((Annexure – II, III, IV, V, VI & VII) to the members.

- Theory Subject - **Basic Electrical Engineering** – I. B.Tech – I Semester –
Common to CSE (AIML), CSE (DS), IT
- **Introduction to Electrical Engineering** – I.B.Tech – I Semester –
ECE
- Laboratory - **Basic Electrical Engineering Lab** – I. B.Tech – I Semester –
Common to CSE (AIML), CSE (DS) & IT
- Theory Subject - **Basic Electrical Engineering** – I. B.Tech – II Semester –
CSE
- **Network Analysis & Synthesis** – I.B.Tech – II Semester –
ECE
- Laboratory - **Basic Electrical Engineering Lab** – I. B.Tech – I Semester –
Common to ECE, CSE

The Board has approved the above syllabi (Annexure – II, III, IV, V, VI & V).

3.0 Any other item with the permission of the Chair

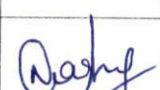
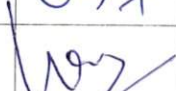
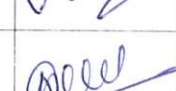
All members have suggested and unanimously agreed to adopt the R25 JNTUH syllabus as the VR25 syllabus, without any deviation in the content for both theory and laboratory courses.

The Board suggested the Chairperson, maintain the Academic Quality, Update the syllabus to maintain the Standards of Institution.


Chairman - BOS
(Dr. V.Raghu Ram Prasad)

Department of Electrical and Electronics Engineering (Others)

Minutes of the 2nd Board of Studies (BoS) meeting held on 19th August 2025, 11.00AM at
HOD'S Chamber, VMTW

S.N o.	Name	Designation	Organization	Position in BoS	Signature
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9	Dr. R. Sridhar	Associate Professor & HOD- BSH	VMTW, Hyderabad.	Special Invitee	

B.Tech.
I Year - I Semester

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BASIC ELECTRICAL ENGINEERING
(Common to CSE(AIML), CSE(DS) & IT)

Course Objectives:

- To understand DC and Single & Three phase AC circuits.
- To study and understand the different types of DC, AC machines and Transformers.
- To import the knowledge of various electrical installations and the concept of power, powerfactor and its improvement.

Course Outcomes: After learning the contents of this paper the student must be able to

- Understand and analyze basic Electrical circuits.
- Study the working principles of Electrical Machines and Transformers.
- Introduce components of Low Voltage Electrical Installations.

UNIT-I:

D.C. Circuits: Electrical circuit elements (R, L and C), voltage and current sources, KVL&KCL, analysis of simple circuits with dc excitation. Superposition, Thevenin and Norton Theorems. Time-domain analysis of first-order RL and RC circuits.

UNIT-II:

A.C. Circuits: Representation of sinusoidal waveforms, peak and rms values, phasor representation, real power, reactive power, apparent power, power factor, Analysis of single-phase ac circuits consisting of R, L, C, RL, RC, RLC combinations (series and parallel), resonance in series R-L-C circuit. Three-phase balanced circuits, voltage and current relations in star and delta connections.

UNIT-III:

Transformers: Ideal and practical transformer, equivalent circuit, losses in transformers, regulation and efficiency. Auto-transformer and three-phase transformer connections.

UNIT-IV:

Electrical Machines: Construction and working principle of dc machine, performance characteristics of dc shunt machine. Generation of rotating magnetic field, Construction and working of a three-phase induction motor, Significance of torque-slip characteristics. Single-phase induction motor, Construction and working. Construction and working of synchronous generator.

UNIT-V:

Electrical Installations: Components of LT Switchgear: Switch Fuse Unit (SFU), MCB, ELCB, MCCB, Types of Wires and Cables, Earthing. Types of Batteries, Important Characteristics for Batteries. Elementary calculations for energy consumption, power factor improvement and battery backup.

TEXT BOOKS:

1. D.P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill, 4th Edition, 2019.
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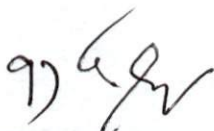
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B.Tech

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I Year – II Semester

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BASIC ELECTRICAL ENGINEERING LABORATORY
(Common to CSE & ECE)**Course Objectives:**

- To measure the electrical parameters for different types of DC and AC circuits using conventional and theorems approach.
- To study the transient response of various R, L and C circuits using different excitations.
- To determine the performance of different types of DC, AC machines and Transformers.

Course Outcomes: After learning the contents of this paper, the student must be able to

- Verify the basic Electrical circuits through different experiments.
- Evaluate the performance calculations of Electrical Machines and Transformers through various testing methods.
- Analyze the transient responses of R, L and C circuits for different input conditions.

List of experiments/demonstrations:**PART- A (compulsory)**

1. Verification of KVL and KCL
2. Verification of Thevenin's and Norton's theorem
3. Transient Response of Series RL and RC circuits for DC excitation
4. Resonance in series RLC circuit
5. Calculations and Verification of Impedance and Current of RL, RC and RLC Series circuits
6. Measurement of Voltage, Current and Real Power in primary and Secondary Circuits of a Single-Phase Transformer
7. Performance Characteristics of a DC Shunt Motor
8. Torque-Speed Characteristics of a Three-phase Induction Motor.

PART-B (any two experiments from the given list)

1. Verification of Superposition theorem.
2. Three Phase Transformer: Verification of Relationship between Voltages and Currents (Star-Delta, Delta-Delta, Delta-star, Star-Star)
3. Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)
4. Measurement of Active and Reactive Power in a balanced Three-phase circuit
5. No-Load Characteristics of a Three-phase Alternator

TEXT BOOKS:

1. D.P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill, 4th Edition, 2019.
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I Year – I Semester

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(Common to CSE(AIML), CSE(DS) & IT)

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- Evaluate the performance calculations of Electrical Machines and Transformers through various testing methods.
- Analyze the transient responses of R, L and C circuits for different input conditions.

List of experiments/demonstrations:**PART- A (compulsory)**

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4. Resonance in series RLC circuit
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6. Measurement of Voltage, Current and Real Power in primary and Secondary Circuits of a Single-Phase Transformer
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8. Torque-Speed Characteristics of a Three-phase Induction Motor.

PART-B (any two experiments from the given list)

1. Verification of Superposition theorem.
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B.Tech.

I Year - II Semester

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BASIC ELECTRICAL ENGINEERING
(CSE)

Course Objectives:

- To understand DC and Single & Three phase AC circuits.
- To study and understand the different types of DC, AC machines and Transformers.
- To impart the knowledge of various electrical installations and the concept of power, powerfactor and its improvement.

Course Outcomes: After learning the contents of this paper the student must be able to

- Understand and analyze basic Electrical circuits.
- Study the working principles of Electrical Machines and Transformers.
- Introduce components of Low Voltage Electrical Installations.

UNIT-I:

D.C. Circuits: Electrical circuit elements (R, L and C), voltage and current sources, KVL&KCL, analysis of simple circuits with dc excitation. Superposition, Thevenin and Norton Theorems. Time-domain analysis of first-order RL and RC circuits.

UNIT-II:

A.C. Circuits: Representation of sinusoidal waveforms, peak and rms values, phasor representation, real power, reactive power, apparent power, power factor, Analysis of single-phase ac circuits consisting of R, L, C, RL, RC, RLC combinations (series and parallel), resonance in series R-L-C circuit. Three-phase balanced circuits, voltage and current relations in star and delta connections.

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B.Tech.

I Year - II Semester

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NETWORK ANALYSIS AND SYNTHESIS (ECE)

Course Objectives:

- To understand the basic concepts on RLC circuits.
- To know the behavior of the steady state and transient states in RLC circuits.
- To understand the two port network parameters.
- Learn the design concepts of various filters and attenuators

Course Outcomes: After learning the contents of this paper the student must be able to

- Gain the knowledge on basic RLC circuits behavior
- Analyse the Steady state and transient analysis of RLC Circuits
- Characterization of two port network parameters
- Analyse the Design aspect of various filters and attenuators

UNIT-I: Network Topology:

Basic cutset and tie set matrices for planar networks, Magnetic Circuits, Self and Mutual inductances, dot convention, impedance, reactance concept, Impedance transformation and coupled circuits, co-efficient of coupling, equivalent T for Magnetically coupled circuits, Ideal Transformer.

UNIT-II: Transient and Steady State Analysis:

RC, RL and RLC Circuits, Sinusoidal, Step and Square responses. RC Circuits as integrator and differentiators. 2nd order series and parallel RLC Circuits, Root locus, damping factor, over damped, under damped, critically damped cases, quality factor and bandwidth for series and parallel resonance, resonance curves.

UNIT-III: Two port network parameters:

Z, Y, ABCD, h and g parameters, Characteristic impedance, Image transfer constant, image and iterative impedance, network function, driving point and transfer functions – using transformed (S) variables, Poles and Zeros. Standard T, π , L Sections, Characteristic impedance, image transfer constants, Design of Attenuators, impedance matching network.

UNIT-IV Filters:

Classification of Filters, Filter Networks, Constant-K Filters-Low pass, high pass, Band pass, band-stop filters, M-derived Filters- T and π filters- Low pass, high pass Attenuators: Types – T, π , L, Bridge T and lattice, Asymmetrical Attenuators T, π , L Equalizers- Types- Series, Shunt, Constant resistance, bridge T attenuation, bridge T phase, Lattice attenuation, lattice Phase equalizers

UNIT-V: Network Synthesis:

Network Synthesis: Driving point impedance and admittance, transfer impedance and admittance, network functions of Ladder and non ladder networks, Poles, Zeros analysis of network functions, Hurwitz polynomials, Positive Real Functions, synthesis of LC, RC and RL Functions by foster and causer methods

TEXT BOOKS:

1. Van Valkenburg -Network Analysis, 3rd Ed., Pearson, 216.
2. JD Ryder - Networks, Lines and Fields, 2nd Ed., PHI, 1999

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REFERENCE BOOKS:

1. J. Edminister and M. Nahvi - Electric Circuits, Schaum's Outlines, Mc Graw Hills Education, 1999.
2. A. Sudhakar and Shyammohan S Palli - Networks & Circuits, 4th Ed., Tata Mc Graw- Hill Publications
3. William Hayt and Jack E. Kimmerley - Engineering Circuit Analysis, 6th Ed., William Hayt and Jack E. Kimmerley, McGraw Hill Company

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B.Tech.

I Year - I Semester

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INTRODUCTION TO ELECTRICAL ENGINEERING (ECE)

Course Objectives:

- To understand DC and Single & Three phase AC circuits.
- To study and understand the different types of DC, AC machines and Transformers.
- To import the knowledge of various electrical installations and the concept of power, powerfactor and its improvement.

Course Outcomes: After learning the contents of this paper the student must be able to

- Understand and analyze basic Electrical circuits.
- Study the working principles of Electrical Machines and Transformers.
- Introduce components of Low Voltage Electrical Installations.

UNIT-I:

D.C. Circuits: Electrical circuit elements (R, L and C), voltage and current sources, KVL&KCL, analysis of simple circuits with dc excitation. Superposition, Thevenin and Norton Theorems. Time-domain analysis of first-order RL and RC circuits.

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