

The institution promotes experiential learning with add-on programs, lab courses, virtual experiments, and technology courses.

Lab courses

III Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Concrete Technology Lab	Determination of normal Consistency and fineness of cement.
		Determination of initial setting time and final setting time of cement.

III Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	CAD Lab	1. Analysis & Design determinate structures using a software
		2. Analysis & Design of fixed & continuous beams using a software
2	Environmental Engineering Lab	1. Determination of pH and Electrical Conductivity (Salinity) of Water and Soil
		2. Determination and estimation of Total Hardness–Calcium & Magnesium.

IV Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Geotechnical Engineering Lab	1. Field density-Core cutter and Sand replacement methods
		2. Permeability of soil - Constant and Variable head tests
2	Remote Sensing & GIS Lab	1. Geo-referencing of Toposheet.
		2. Preparation of Base map from topo sheet including legend, scale and annotation

III Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Electrical Machines-II Laboratory	1. Brake test on three phase Induction Motor
		2. No-load & Blocked rotor tests on three phase Induction motor
2	Control Systems Laboratory	1. Time response of Second order system
		2. Characteristics of Synchros

III Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	Power Electronics Laboratory	1. Characteristics of Thyristor, MOSFET & IGBT.
		2. R, RC & UJT firing circuits for SCR.
2	Microprocessors & Microcontrollers Laboratory	Arithmetic operation – Multi byte addition and subtraction, multiplication and division – Signed and unsigned arithmetic operation, ASCII – Arithmetic operation
		Logic operations – Shift and rotate – Converting packed BCD to unpacked BCD, BCD to ASCII conversion.

IV Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Linear & Digital IC Applications Laboratory	Determination of parameters like input & output offset voltages and currents, Slew rate, CMRR of op amp 741.
		Inverting & Non Inverting Amplifiers
2	Power Systems & Simulation Laboratory	Sequence impedances of 3 phase Transformer.
		Sequence impedances of 3 phase Alternator by Fault Analysis


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II Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Metallurgy & Mechanics of Solids Lab	1. Preparation and study of the Microstructure of pure metals like Iron, Cu and Al.
		2. Preparation and study of the Microstructure of Mild steel, Medium carbon steels, High carbon steels.
2	Production Technology Lab	Design and making of pattern i. Single piece pattern ii. Split pattern
		Sand properties testing i. Sieve analysis (dry sand) ii. Clay content test iii. Moisture content test iv. Strength test (Compression test & Shear test) v. Permeability test

II Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	Fluid Mechanics & Hydraulic Machines Lab	Impact of jets on Vanes.
		Performance Test on Pelton Wheel.
2	Machine Tools Lab	Introduction of general purpose machines - Lathe, Drilling machine, Milling machine, Shaper, Planing machine, Slotting machine, Cylindrical grinder, Surface grinder and Tool and cutter grinder.
		Operations on Lathe machines (i) Step turning and Knurling (ii) Taper turning and Knurling (iii) Thread cutting and knurling (iv) Drilling and tapping

III Year – I SEMESTER

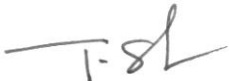
S.no	Lab name	List of lab experiments names
1	Thermal Engineering Lab	I.C. Engines valve and port timing diagrams.
		Testing of Fuels – Viscosity, flash point/fire point, carbon residue, calorific value.
2	Theory of Machines Lab	1. To determine whirling speed of shaft theoretically and experimentally.
		2.To determine the position of sleeve against controlling force and speed of a Hartnell governor and to plot the characteristic curve of radius of rotation.

III Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	Simulation of Mechanical Systems Lab	1. Mass-Spring-Damper with controller
		2. Double Mass-Spring- Damper
2	Heat Transfer Lab	1. COP of VCR System with Capillary and thermal expansion valve.
		2. Determination of overall heat transfer coefficient of a composite slab

IV Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Finite Element Simulation Lab	1. Determination of deflection and stresses in 2D and 3D trusses and beams.
		2. Determination of deflections component and principal and Von-mises stresses in plane


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II Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Electronic Devices and Circuits - Lab	P-N Junction Diode Characteristics Part A: Germanium Diode (Forward bias & Reverse bias) Part B: Silicon Diode (Forward Bias only)
		Zener Diode Characteristics Part A: V-I Characteristics Part B: Zener Diode as Voltage Regulator
2	Switching Theory and Logic Design - Lab	Verification of truth tables of Logic gates Two input (i) OR (ii) AND (iii) NOR (iv) NAND (v) Exclusive OR (vi) Exclusive NOR
		Design a simple combinational circuit with four variables and obtain minimal SOP expression and verify the truth table using Digital Trainer Kit

II Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	Electronic Circuit Analysis - Lab	1. Determination of f_T of a given transistor.
		2. Voltage-Series Feedback Amplifier
2	Analog Communications - Lab	Amplitude Modulation - Modulation & Demodulation
		Spectrum Analysis of Modulated signal using Spectrum Analyzer

III Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Linear Integrated Circuits and Applications - Lab	Study of OP AMPs – IC 741, IC 555, IC 565, IC 566, IC 1496 -functioning, parameters and Specifications.
		OP AMP Applications – Adder, Subtractor, Comparator Circuits.

2	Digital Communications Lab	1. Time division multiplexing
		2. Pulse code modulation.

III Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	VLSI Lab	1. 4-bit ripple carry and carry look ahead adder using behavioural, dataflow and structural modeling
		a) 16:1 mux through 4:1 mux b) 3:8 decoder realization through 2:4 decoder
2	Digital Signal Processing Lab	Verify the Linear Convolution of two DT signals a) Using MATLAB b) Using Code Composer Studio (CCS)
		Verify the Circular Convolution of two DT signals a) Using MATLAB b) Using Code Composer Studio (CCS)

IV Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Internet of Things Lab	1. Introduction to Raspberry Pi Board/ Arduino/ NodeMCU.
		2. Familiarization with ARM keil MDK for programming and debugging an application on the PSoC 4 BLE chip and perform necessary software installation
2	Microwave and Optical Communication Engineering LAB	1. Reflex Klystron Characteristics.
		2. Gunn Diode Characteristics.

II Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Python programming lab	Write a program that asks the user for a weight in kilograms and converts it to pounds. There are 2.2 pounds in a kilogram.
		Write a program that asks the user to enter three numbers (use three separate input statements). Create variables called total and average that hold the sum and average of the three numbers and print out the values of total and average.
2	Data Structures through C++ Lab	Write a main function to create objects of DISTANCE class. Input two distances and output the sum.
		Write a C++ Program to illustrate the use of Constructors and Destructors (use the above program.)

II Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	Java Programming Lab	Write a JAVA program to display default value of all primitive data type of JAVA
		Write a java program that display the roots of a quadratic equation $ax^2+bx=0$. Calculate the discriminate D and basing on value of D, describe the nature of root.
2	Database Management Systems Lab	Creation, altering and dropping of tables and inserting rows into a table (use constraints while creating tables) examples using SELECT command.
		Queries (along with sub Queries) using ANY, ALL, IN, EXISTS, NOTEXISTS, UNION, INTERSET, Constraints. Example:- Select the roll number and name of the student who secured fourth rank in the class.

III Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	Computer Networks Lab	Implement the data link layer framing methods such as character stuffing and bit stuffing.
		Write a C program to develop a DNS client server to resolve the given hostname.
2	AI Tools & Techniques Lab	Write predicates One converts centigrade temperatures to Fahrenheit, the other checks if a temperature is below freezing
		Write a program in turbo prolog for medical diagnosis and show the advantage and disadvantage of green and red cuts

III Year – II SEMESTER

S.no	Lab name	List of lab experiments names
1	Web Technologies Lab	Palindrome. When a button is pressed an appropriate javascript function should be called to display a. Factorial of that number b. Fibonacci series up to that number c. Prime numbers up to that number d. Is it palindrome or not
		Example PHP program for registering users of a website and login.

IV Year – I SEMESTER

S.no	Lab name	List of lab experiments names
1	UML Lab	Familiarization with Rational Rose or Umbrella environment
		Develop sample diagrams for other UML diagrams - state chart diagrams, activity diagrams and deployment diagrams

Projects:

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Vidyut Nagar, Kakinada-533003, Kakinada, Dt. ANDHRA PRADESH.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



CERTIFICATE

This is to certify that the project work entitled, "VIRTUAL MOUSE AND VIRTUAL KEYBOARD USING HAND CLASS GESTURE" is a bonafide work of P.DORIA KAMAL(196K1A0524),S.G.L.S.MAHURI(196K1A0533),E.ARUNPREETHAM(196K1A0550), Y.PRUDHVI RAJU(196K1A0542) submitted to the department of **Computer Science and Engineering**, in partial fulfilment of the requirements for the award of the degree of **BACHELOR OF TECHNOLOGY** in **COMPUTER SCIENCE AND ENGINEERING** from IDEAL INSTITUTE OF TECHNOLOGY, Kakinada.

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Vidyut Nagar, Kakinada-533003, KAKINADA DL, ANDHRA PRADESH.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



CERTIFICATE

This is to certify that the project work entitled, "IDEAL RESULTS MANAGEMENT SYSTEM" is a bonafide work of G. L SANTHOSHI (196K1A0512), N. MANEESH KHANNA (196K1A0521), S. SLVDG P CHELLAYYAMMA (196K1A0532), P. VEERA DILEEP (196K1A0563) submitted to the department of Computer Science and Engineering, in partial fulfillment of the requirements for the award of the degree of BACHELOR OF TECHNOLOGY in COMPUTER SCIENCE AND ENGINEERING from IDEAL INSTITUTE OF TECHNOLOGY, Kakinada.

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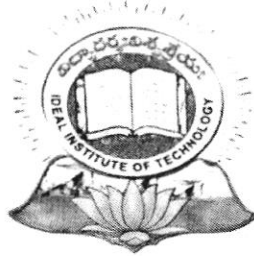
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This is to certify that the project work entitled, "EMPLOYEE LEAVE MANAGEMENT SYSTEM" is a bonafide work of CHUNDRU NAMRATHA (196K1A0508), MOHAMMED SAMEER (196K1A0518), JAMPANA RANI GAYATHRI DEVI (196K1A0551), MURAMALLA NAGA SURYA (196K1A0556) submitted to the department of **Computer Science and Engineering**, in partial fulfilment of the requirements for the award of the degree of **BACHELOR OF TECHNOLOGY** in **COMPUTER SCIENCE AND ENGINEERING** from IDEAL INSTITUTE OF TECHNOLOGY, Kakinada.

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DEPARTMENT OF MECHANICAL ENGINEERING




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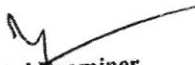
This is to certify that the project work entitled, "AN EXPERIMENTAL INVESTIGATION ON EFFECT OF COATINGS ON THE SURFACES ON DROP WISE CONDENSATION" is a bonafied work of


CH.SAI ESHWAR (196K1A0304)
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DEPARTMENT OF MECHANICAL ENGINEERING



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This is to certify that the project work entitled, "PERFORMANCE ON VCR PETROL ENGINE WITH ALTERNATIVE AND BLEND OF FUELS" is a bonafide work of

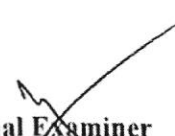
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DEPARTMENT OF MECHANICAL ENGINEERING

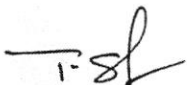


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This is to certify that the project work entitled,
"FABRICATION OF GRASS CUTTING MACHINE" is a bonafied work of
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2019-2023

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING**



CERTIFICATE

This is to certify that the project work entitled, "MULTI AREA LOAD FREQUENCY CONTROL" is a bonafide work of IJAJHNAVY (206K5A0202), B.PRASANNA KUMAR (206K5A0204), CHLVV SATYANARAYANA (206K5A0205), T.AYYAPPA (206K5A0216), Y.SRI PADMAVATHI (196K1A0207) **submitted to the department of Electrical and electronics Engineering, in a partial fulfilment of the requirements for the award of the degree of BACHELOR OF TECHNOLOGY in ELECTRICAL AND ELECTRONICS ENGINEERING from IDEAL INSTITUTE OF TECHNOLOGY, Kakinada.**

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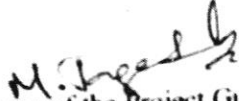
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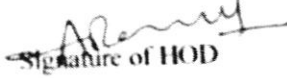
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CERTIFICATE

This is to certify that the project work entitled, "IMPROVING THE PERFORMANCE OF INTERLINE DYNAMIC VOLTAGE RESTORER BASED ON CASCADED H-BRIDGE FED INDUCTIO MOTOR DRIVE" is a bonafide work of J.SATYA PAVAN KUMAR (196K1A0202), P.PRASAD (206K5A0213), J.SANTOSH KUMAR (206K5A0208), A.UDAYA RAMA SRI SAI (206K5A0201), D.JYOTHI KIRAN(196K1A0205) Submitted to the department of **Electrical and Electronics Engineering**, in a partial fulfilment of the requirements for the award of the degree of **BACHELOR OF TECHNOLOGY** in **ELECTRICAL AND ELECTRONICS ENGINEERING** from **IDEAL INSTITUTE OF TECHNOLOGY, Kakinada**.


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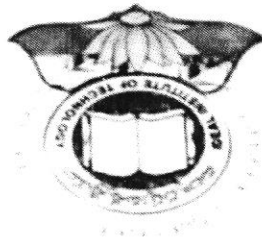
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Head of the Department
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Mr. M. JAGADEESH, M.Tech.
Signature of the Project Guide

TECHNOLOGY, Kakinda
AND ELECTRONICS ENGINEERING from IDEAL INSTITUTE OF
award of the degree of BACHELOR OF TECHNOLOGY in ELECTRICAL
Electronics Engineering in partial fulfillment of the requirements for the
PAPER A (206NSA0211) submitted to the department of Electrical and
(206NSA0220), DEPT. OF ELECTRICAL ENGINEERING, NANKA
BOJJI RAJ SEKHAR (206NSA0203), NANKAVALA XARBITHA SRI
GUIDES BY MODELING AND SIMULATION is a bonafide work of
INVERTER FOR HIGH POWER QUALITY BY USING HSS MICRO
This is to certify that the project work entitled "ELECTRIC PHASE

CERTIFICATE



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

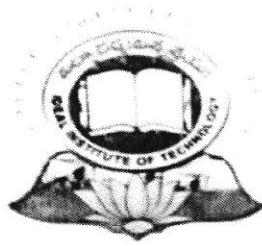
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CERTIFICATE

This is to certify that the project work entitled "4 LEG 2 PHASE INVERTER FOR HIGH POWER QUALITY BY USING HESS IN MICRO GRIDS BY MODELING AND SIMULATION" is a bonafide work of BOJLU RAJ SEKHAR (206K5A0203), YANKAYALA SABITHA SRI (206K5A0220), DEEPALA DEVI ALITHAMBIKA (196KTA0201), NARKA PAVITRA (206K5A0211) submitted to the department of **Electrical and Electronics Engineering** in partial fulfillment of the requirements for the award of the degree of BACHELOR OF TECHNOLOGY in ELECTRICAL AND ELECTRONICS ENGINEERING from IDEAL INSTITUTE OF TECHNOLOGY, Kakinada


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