



REPORT ON ACADEMIC ACTIVITIES OF VIRTUAL LABS OF JYOTHI ENGINEERING COLLEGE IN ACADEMIC YEAR 2020-21

Virtual labs of Jyothi Engineering College conducted virtual lab sessions during pandemic situation very successfully. All students have performed practical as per instruction provided in google classrooms and also shown results of their assigned practical. The students showed their enthusiasm in clearing doubts and they were keen on completing the simulated experiments. Faculty also expresses satisfaction about this virtual lab facility initiated by Govt. of India.

Following table shows list of the experiments performed in this academic year in each programme.

S. No	List of Experiments	UG Semester	Name of the Lab
Civil Engineering			
1	Study of various parts of Auto Level	S3	CEL 203 Survey Lab
2	Observations of Vertical and Horizontal angles using Total Station	S3	CEL 203 Survey Lab
3	Tensile Test on Mild Steel	S4	CEL 202 Material testing Lab
4	Torsion Test on Mild Steel	S4	CEL 202 Material testing Lab
5	Calibration of V-Notch	S4	CEL 204 Fluid Mechanics Lab
6	Venturimeter	S4	CEL 204 Fluid Mechanics Lab
7	Performance Characteristics of Centrifugal Pump	S4	CEL 204 Fluid Mechanics Lab
8	Performance Characteristics of Pelton Turbine	S4	CEL 204 Fluid Mechanics Lab
Computer Science & Engineering			
1	Data Structures Lab	S3	CS231 Data Structures Lab
2	Computer Programming Lab	S2	CS102 C programming
3	Core Java Programming Lab	S4	CS206 Object Oriented Design and Programming
4	Python Programming Lab	S1	CS110 introduction to computing and problem solving
5	Data Structures - II	S3	CS231 Data Structures Lab
6	Digital Logic Design using Gates Lab	S4	CS234 Digital Systems Lab
7	Problem Solving Lab	S1	CS102 C Programming
8	Computer Architecture & Organization Lab	S4	CS234 Digital Systems Lab
Electronics & Communication Engineering			



Jyothi Engineering College

NAAC Reaccredited College with NBA Reaccredited Programmes*

Approved by AICTE and Affiliated to APJ Abdul Kalam Technological University
 A CENTRE OF EXCELLENCE IN SCIENCE AND TECHNOLOGY BY THE CATHOLIC ARCHDIOCESE OF TRICHUR
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*NBA reaccredited BTech Programmes in Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Electrical and Electronics Engineering and Mechanical Engineering valid till 2025

1	Analysis and Synthesis of Boolean Expressions using Basic Logic Gates	S3	ECL 203 Logic design lab
2	Characterization of Digital Logic Families	S3	ECL 203 Logic design lab
3	Analysis and Synthesis of Logic Functions using Multiplexers	S3	ECL 203 Logic design lab
4	Analysis and Synthesis of Logic Functions using Decoders	S3	ECL 203 Logic design lab
5	Analysis and Synthesis of Arithmetic Expressions using Adders / Subtractors	S3	ECL 203 Logic design lab
6	Analysis and Synthesis of Sequential Circuits using Basic Flip-Flops	S3	ECL 203 Logic design lab
7	Analysis and Synthesis of Boolean Relations using Digital Comparators	S3	ECL 203 Logic design lab
8	Analysis and Synthesis of Sequential Circuits using Basic Flip-Flops	S3	ECL 203 Logic design lab
1	Rc integrator and differentiator	S4	ECL 202 Analog circuits and simulation lab
Electrical & Electronics Engineering			
1	Kirchhoff's Laws	S3	EEL201 Circuits & Measurements Lab
2	Series LCR Circuits / R-L-C Circuit Analysis	S3	EEL201 Circuits & Measurements Lab
3	Verification of Superposition Theorem	S3	EEL201 Circuits & Measurements Lab
4	Measurement of Self Inductance by Maxwell Bridge	S3	EEL201 Circuits & Measurements Lab
5	To study the Kelvin Double Bridge for Low resistance measurement	S3	EEL201 Circuits & Measurements Lab
6	Measurement of Capacitance by Schering Bridge	S3	EEL201 Circuits & Measurements Lab
7	Ohms Law	S3	EEL203 Analog Electronics Lab
8	VI Characteristics of a Diode	S3	EEL203 Analog Electronics Lab
9	Half Wave Rectification	S3	EEL203 Analog Electronics Lab
10	Full Wave Rectification	S3	EEL203 Analog Electronics Lab
11	Zener Diode-Voltage Regulator	S3	EEL203 Analog Electronics Lab
12	RC Differentiator and Integrator	S3	EEL203 Analog Electronics Lab



Mechanical Engineering			
1	Tensile Test on Mild Steel	S3	MEL203 Materials testing lab.
2	Charpy Impact Test	S3	MEL203 Materials testing lab.
3	Izod Impact Test	S3	MEL203 Materials testing lab.
4	Rockwell Hardness Test	S3	MEL203 Materials testing lab.
5	Double Acting Reciprocating Pump	S4	MEL202 FM&HM LAB
6	Venturimeter	S4	MEL202 FM&HM LAB
7	Performance Characteristics of Centrifugal Pump	S4	MEL202 FM&HM LAB
8	Performance Characteristics of Pelton Turbine	S4	MEL202 FM&HM LAB
Mechatronics			
1	Addition of Two Numbers	S4	MRL204 Microprocessor & Embedded Systems Lab
2	Subtraction of Two 8-Bit Numbers	S4	MRL204 Microprocessor & Embedded Systems Lab
3	Multiplication (Bit Rotation Method) and Division(Repeated Subtraction Method)	S4	MRL204 Microprocessor & Embedded Systems Lab
4	Finding Square-Root of a Number	S4	MRL204 Microprocessor & Embedded Systems Lab
5	To determine the overall heat transfer coefficient	S4	MRL202 Mechanical Engineering Lab
6	Conduction analysis of Double Material Slab	S4	MRL202 Mechanical Engineering Lab
7	Forced vibration of SDOF system	S4	MRL202 Mechanical Engineering Lab
8	Free vibration of cantilever beam	S4	MRL202 Mechanical Engineering Lab

Jyothi Engineering College
Virtual Lab Nodal Center

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