2.6 Student Performance and Learning Outcomes

2.6.1 Program and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

S.No.	Content
1.	**PO/PSO Dissemination**
	1.1 Website
	1.2 HoD Cabin
	1.3 Notice Board
	1.4 Class Rooms
	1.5 Laboratories
	1.6 Course Files
	1.7 Lab Manuals
	1.8 Department News Letter
	1.9 Department Magazine
2.	**Course Outcome Dissemination**
	Website
	Course File
	Lab Manuals

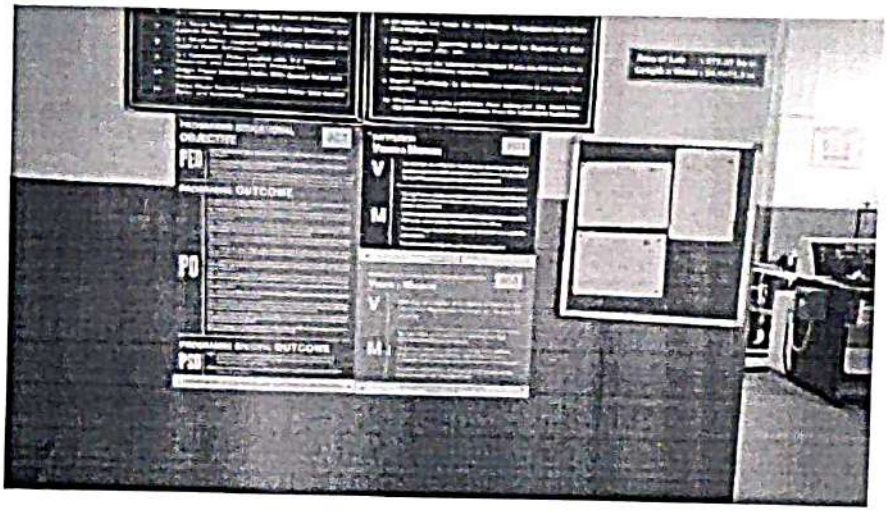
JCT College of Engineering & Technology Pichanur CBE - 105.

PRINCIPAL
JCT College of Engineering and Technology
PICHANUR, COIMBATORE - 641 105.

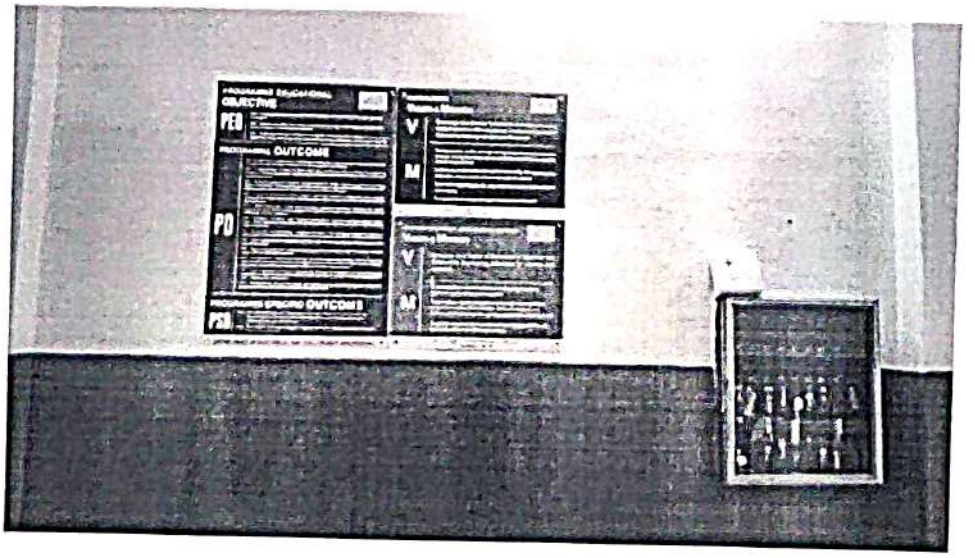
DISSEMINATION OF PO AND PSO

LABORATORIES

ELECTRICAL MACHINES LABORATORY

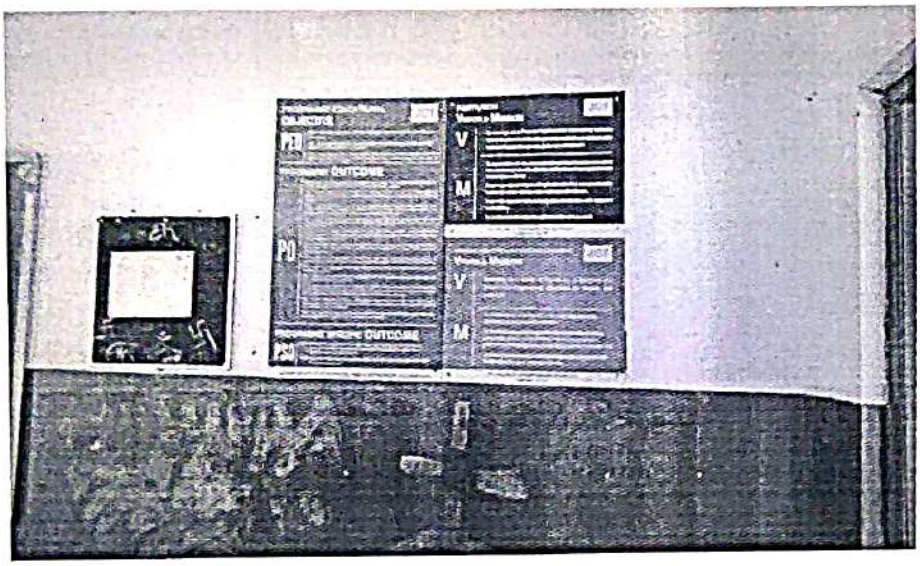


HOD CABIN



PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

CLASS ROOM

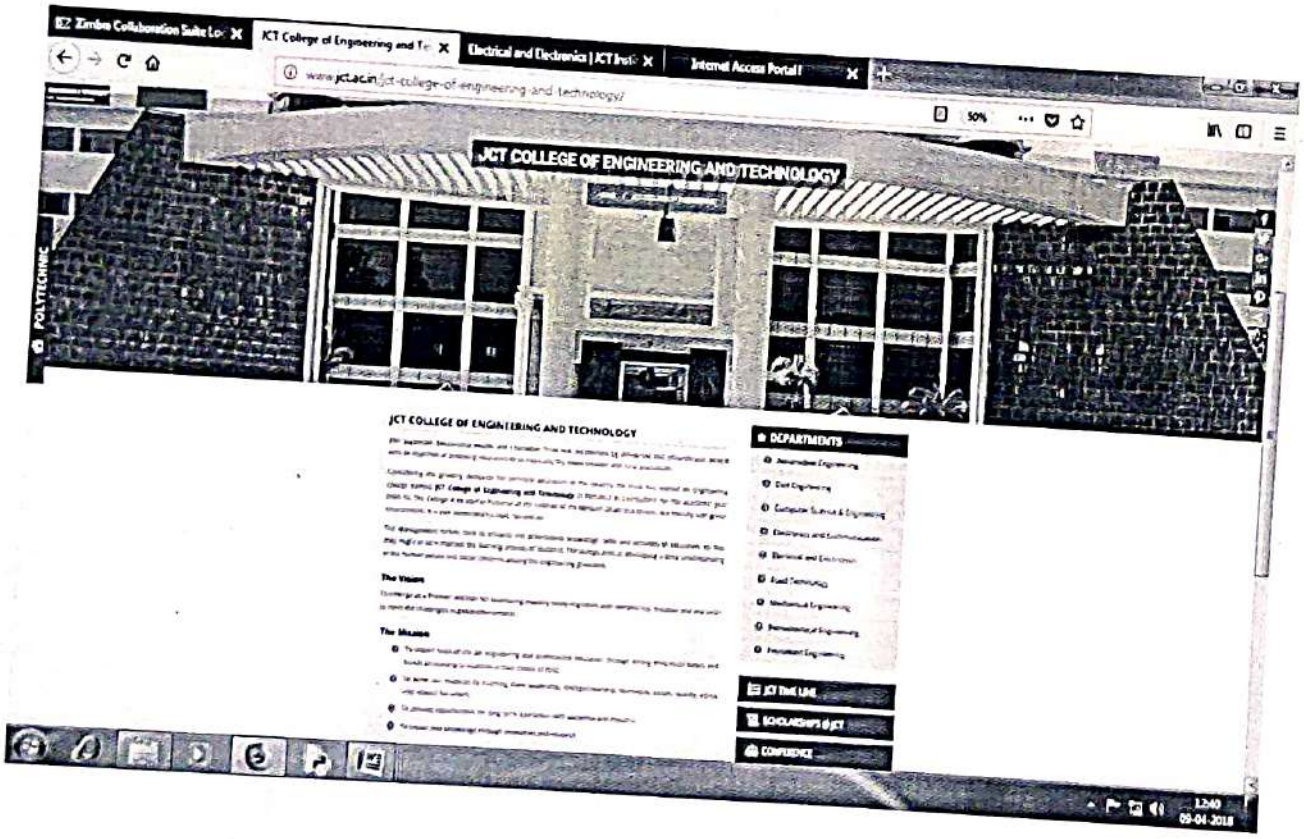


JCT College of Engineering & Technology
Pichanur
CSE - 105.

PRINCIPAL
JCT College of Engineering and Technology
PICHANUR, COIMBATORE - 641 105.

DISSEMINATION OF VISION& MISSION OF INSTITUTE

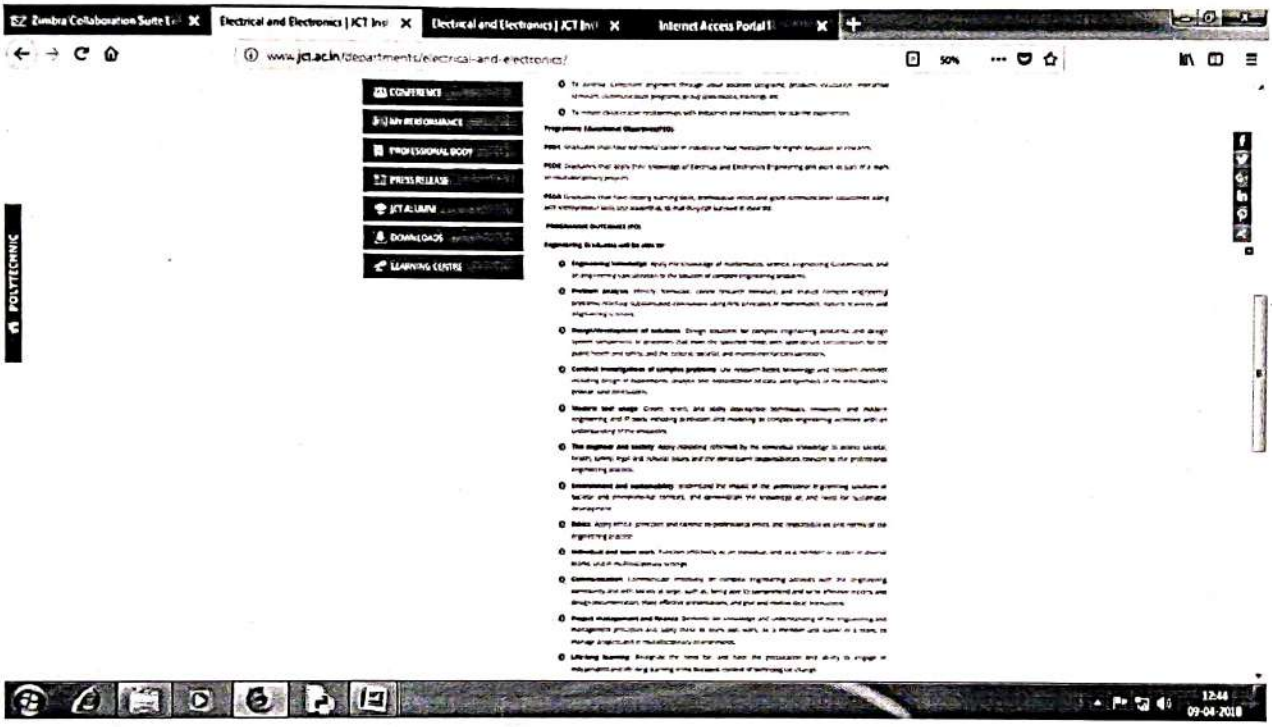
(COLLEGE WEBSITE)



PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

DISSEMINATION OF PROGRAM EDUCATIONAL OBJECTIVES (PEOS) AND PROGRAM OUTCOMES (POS)

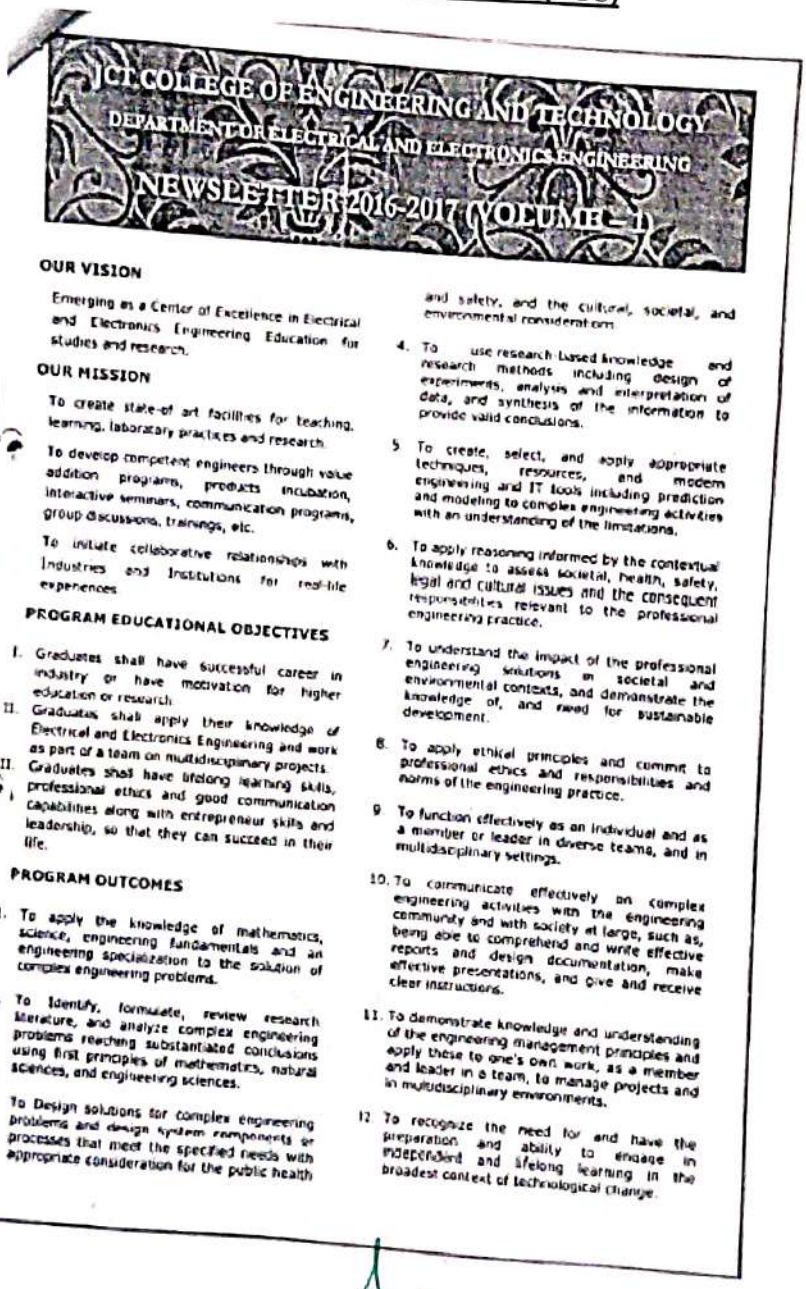
(COLLEGE WEBSITE)



JCT College of Engineering & Technology
Pichanur
CBE - 105.

PRINCIPAL
JCT College of Engineering and Technology
PICHANUR, COIMBATORE - 641 105.

DISSEMINATION OF PROGRAM EDUCATIONAL OBJECTIVES (PEOS) AND PROGRAM OUTCOMES (POS)



JCT COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NEWSLETTER 2016-2017 (VOLUME – 1)

OUR VISION

Emerging as a Center of Excellence in Electrical and Electronics Engineering Education for studies and research.

OUR MISSION

To create state-of art facilities for teaching, learning, laboratory practices and research.

To develop competent engineers through value addition programs, products incubation, interactive seminars, communication programs, group discussions, trainings, etc.

To initiate collaborative relationships with Industries and Institutions for real-life experiences.

PROGRAM EDUCATIONAL OBJECTIVES

I. Graduates shall have successful career in industry or have motivation for higher education or research.

II. Graduates shall apply their knowledge of Electrical and Electronics Engineering and work as part of a team on multidisciplinary projects.

III. Graduates shall have lifelong learning skills, professional ethics and good communication capabilities along with entrepreneur skills and leadership, so that they can succeed in their life.

PROGRAM OUTCOMES

1. To apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

2. To identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. To Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. To use research-based knowledge and research methods including design of experiments, analyses and interpretation of data, and synthesis of the information to provide valid conclusions.

5. To create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. To apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. To understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. To apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. To function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.

10. To communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. To demonstrate knowledge and understanding of the engineering management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. To recognize the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

SAMPLE

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE - 641105

NBA NAAC A

COURSE INFORMATION SHEET

DEPARTMENT : ELECTRICAL AND ELECTRONICS ENGINEERING	**PROGRAMME :** B.E (EEE)
COURSE: Measurements & Instrumentation	**SEMESTER:** IV **CREDITS:** 3
COURSE CODE: C212 **REGULATION:** R2017	**COURSE TYPE:** CORE / ~~ELECTIVE / BREADTH / S&H~~
COURSE AREA / DOMAIN: Electrical	**CONTACT HOURS:** 3 hours/Week
CORRESPONDING LAB COURSE CODE(IF ANY): NIL	**LAB COURSE NAME (IF ANY):** NIL

SYLLABUS:

UNIT	DETAILS	HOURS
I	**INTRODUCTION** Functional elements of an instrument - Static and dynamic characteristics - Errors in measurement - Statistical evaluation of measurement data - Standards and calibration - Principle and types of analog and digital voltmeters, ammeters.	9
II	**ELECTRICAL AND ELECTRONIC INSTRUMENTS** Principle and types of multimeters - Single and three phase watt meters and energy meters – Magnetic measurements – Determination of B-H curve and measurements of iron loss - Instrument transformers – Instruments for measurement of frequency and phase.	9
III	**COMPARATIVE METHODS OF MEASUREMENTS** D.C potentiometers, D.C (Wheat stone, Kelvin and Kelvin Double bridge) & A.C bridges (Maxwell, Anderson and Schering bridges), transformer ratio bridges, self balancing bridges. Interference & screening – Multiple earth and earth loops - Electrostatic and electromagnetic Interference –Grounding techniques.	9
IV	**STORAGE AND DISPLAY DEVICES** Magnetic disk and tape - Recorders, digital plotters and printers, CRT display, digital CRO, LED, LCD & Dot matrix display - Data loggers.	9
V	**TRANSDUCERS AND DATA ACQUISITION SYSTEMS** Classification of transducers - Selection of transducers - Resistive, capacitive & inductive Transducers - Piezoelectric, Hall effect, optical and digital transducers - Elements of data acquisition system - Smart sensors, Thermal Imagers.	9
	TOTAL HOURS	45 Periods

SAMPLE

PRINCIPAL
JCT College of Engineering and Technology
PICHANUR, COIMBATORE - 641 105.

JCT College of Engineering & Technology
Pichanur
CBE - 105.

TEXT/REFERENCE BOOKS:

T / R	AUTHORS / BOOK TITLE / PUBLICATION
T	A.K. Sawhney, 'A Course in Electrical & Electronic Measurements & Instrumentation', Dhanpat Rai and Co, 2010.
T	J. B. Gupta, 'A Course in Electronic and Electrical Measurements', S. K. Kataria & Sons, Delhi, 2013.
T	Doebelin E.O. and Manik D.N., Measurement Systems - Applications and Design, Special Indian Edition, McGraw Hill Education Pvt. Ltd., 2007
R	H.S. Kalsi, 'Electronic Instrumentation', McGraw Hill, III Edition 2010.
R	D.V.S. Murthy, 'Transducers and Instrumentation', Prentice Hall of India Pvt Ltd, 2015.
R	David Bell, 'Electronic Instrumentation & Measurements', Oxford University Press, 2013
R	Martin Reissland, 'Electrical Measurements', New Age International (P) Ltd., Delhi, 2001
R	Alan. S. Morris, Principles of Measurements and Instrumentation, 2nd Edition, Prentice Hall of India, 2003.

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
C103	Engineering Physics	Thermal Physics	I
C111	Physics for Electronic Engineering	Magnetic and Dielectric Properties of Materials	II

COURSE OBJECTIVES:

To impart knowledge on the following topics

1	Basic functional elements of instrumentation.
2	Fundamentals of electrical and electronic instruments.
3	Comparison between various measurement techniques.
4	Various storage and display devices
5	Various transducers and the data acquisition systems

SAMPLE

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE - 641105

COURSE OUTCOMES:

S.NO.	DESCRIPTION On completion of this course the students will be able to	Bloom's Taxonomy Level	PO(1..17) MAPPING	PSO(1..2) MAPPING
C212.1	Infer the Basic functional elements of instrumentation	Understand (level 2)	PO1 & PO2	
C212.2	Understand the concepts of Fundamentals of electrical and electronic instruments	Understand (level 2)	PO1, PO2 & PO6	
C212.3	Compare the various measurements techniques	Analyze (level 4)	PO1, PO3 & PO5	
C212.4	Explain the Various storage and display devices	Understand (level 2)	PO1, PO12 & PSO2	PSO2
C212.5	Understand the concepts Various transducers and the data acquisition system	Understand (level 2)	PO1, PO3, PO6, PO12 & [illegible]	PSO2
COURSE OVERALL PO/PSO MAPPING			PO1, PO2, PO3, PO4, PO5, PO12 & PSO2	

SAMPLE

JCT College of Engineering & Technology
Pichanur
CBE - 105.

PRINCIPAL
JCT College of Engineering and Technology
PICHANUR, COIMBATORE - 641 105.

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE - 641305

COURSE INFORMATION SHEET

DEPARTMENT : ELECTRICAL AND ELECTRONICS ENGINEERING	**PROGRAMME :** B.E (EEE)
COURSE: Microprocessors and Microcontrollers Laboratory	**SEMESTER:** VI **CREDITS:** 2
COURSE CODE: EE 8681 **REGULATION:** 2017	**COURSE TYPE:** CORE / ~~ELECTIVE / BREADTH /~~ S&H
COURSE AREA / DOMAIN: Electronics	**CONTACT HOURS:** 3 hours/Week
CORRESPONDING LAB COURSE CODE(IF ANY): -	**LAB COURSE NAME (IF ANY):** -

SYLLABUS:

Sl. No.	LIST OF EXPERIMENTS
1.	Simple arithmetic operations: addition / subtraction / multiplication / division.
2.	Programming with control instructions: (i) Ascending / Descending order, Maximum / Minimum of numbers (ii) Programs using Rotate instructions (iii) Hex / ASCII / BCD code conversions.
3.	Interface Experiments: with 8085 (i) A/D Interfacing & (ii) D/A Interfacing
4.	Traffic light controller
5.	I/O Port / Serial communication
6.	Programming Practices with Simulators/Emulators/open source
7.	Read a key, interface display
8.	Demonstration of basic instructions with 8051 Micro controller execution, including: (i) Conditional jumps, looping (ii) Calling subroutines
9.	Programming I/O Port 8051 (i) Study on interface with A/D & D/A (ii) Study on interface with DC & AC motor
10.	Mini project development with processors
	TOTAL HOURS **45 Hrs**

SAMPLE

PRINCIPAL
JCT College of Engineering & Technology
PICHANUR, COIMBATORE - 641 105.

JCT

JCT COLLEGE OF ENGINEERING AND TECHNOLOGY
PICHANUR, COIMBATORE - 641105

TEXT/REFERENCE BOOKS:

T / R	AUTHORS / BOOK TITLE / PUBLICATION
	Nil

COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
C202	Digital Logic Circuits	Number Systems & Code conversions	III
C302	Microprocessors and Microcontrollers	Functional Building Blocks of Processor, Memory Organization, I/O Ports, Interrupts, Assembly Language Programming & Case Studies	V

COURSE OBJECTIVES:

1	Understand the 8085 & 8051 concepts, architecture, programming and application of Microcontrollers
2	Understand the Interfacing Techniques of microprocessors and microcontrollers.
3	To simulate various microprocessors and microcontrollers using KEIL or Equivalent simulator.

COURSE OUTCOMES:

S.NO.	DESCRIPTION	Blooms' Taxonomy Level	PO(1..12) MAPPING	PSO(1..2) MAPPING
On completion of this course the students will be able to				
C317.1	Explain the fundamentals of assembly level programming of microprocessors and microcontroller	Understand (level 2)	PO1	PSO2
C317.2	Apply computing platform and software for engineering problems	Apply (level 3)	PO1, PO9,PO12	PSO2
C317.3	Experiment with different types interface with processor an contrpller	Apply (level 3)	PO1 ,PO4	PSO2
C317.4	Applying the concepts in real- time applications	Apply (level 3)	PO1, PO2, PO3, PO4, PO9 & PO12	PSO2
C317.5	Design an innovative ideas using simulation Tools	Create (level 6)	PO1, PO2, PO3,PO5, PO6,PO9, PO10,PO11	PSO1 & PSO2
COURSE OVERALL PO/PSO MAPPING:		PO1, PO2, PO3,PO5, PO6,PO9, PO10,PO11,PO12, PSO1 & PSO2,		

SAMPLE

JCT College of Engineering & Technology Pichanur CBE - 105

PRINCIPAL
JCT College of Engineering and Technology
PICHANUR, COIMBATORE - 641 105.