Malineni Lakshmaiah Women's Engineering College
(Approved by AICTE & Affiliated to JNTUK, Kakinada)
Pulladigunta (V), Vatticherukuru(M), Guntur-522017
(ISO 9001: 2015 Certified)

DEPARTMENT OF SCIENCE AND HUMANITIES

SEM-II **A.Y. 18-19**

C113 (APPLIED CHEMISTRY)

C113	APPLIED CHEMISTRY	3 0 0
C113.1	Discuss the structure properties and applications of polymers	
C113.2	Specify the quality and composition of fuels	
C113.3	Explain the mechanism of corrosion and apply few corrosion control methods	
C113.4	Illustrate the importance of advanced materials in engineering	
C113.5	Simulate the non conventional energy sources to produce electric power	

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C113.1	3	2	2	-	-	-	-	-	-	-	-	-
C113.2	2	3	2	-	-	-	-	-	-	-	-	-
C113.3	3	2	2	-	-	-	-	-	-	-	-	-
C113.4	2	2	2	-	-	-	-	-	-	-	-	-
C113.5	2	3	2	-	-	-	-	-	-	-	-	-
C113	2.4	2.4	2	-	-	-	-	-	-	-	-	-

SIGNATURE OF THE FACULTY

HOD

Dept. of Science & Humanities
Malineni Lakshmaiah Women's Engineering College
Pulladigunta, GUNTUR-522017

PRINCIPAL

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

Malineni Lakshmaiah Women's Engineering College
(Approved by AICTE & Affiliated to JNTUK, Kakinada)
Pulladigunta (V), Vatticherukuru(M), Guntur-522017
(ISO 9001: 2015 Certified)

DEPARTMENT OF SCIENCE AND HUMANITIES

SEM-II A.Y. 20-21

C109 (MATHEMATICS-II)

C109	MATHEMATICS -II	3 0 0
C109.1	Determine the rank of a matrix and solve the system of linear algebraic equations.	
C109.2	Determine the eigen values and eigen vectors of a matrix and discuss the nature of Quadratic forms.	
C109.3	Evaluate approximating the roots of algebraic and transcendental equations by iterative methods.	
C109.4	Apply Newton's forward ,backward and Lagranges for equal and unequal intervals.	
C109.5	Evaluate the real definite integrals and solve the first order ordinary differential equations by numerical methods.	

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C109.1	3	1	-	-	-	-	-	-	-	-	-	-
C109.2	3	1	-	-	-	-	-	-	-	-	-	-
C109.3	2	1	-	-	-	-	-	-	-	-	-	-
C109.4	1	1	-	-	-	-	-	-	-	-	-	-
C109.5	1	1	-	-	-	-	-	-	-	-	-	-
C109	2	1	-	-	-	-	-	-	-	-	-	-

SIGNATURE OF THE FACULTY

HOD

Dept. of Science & Humanities
Malineni Lakshmaiah Women's Engineering College
Pulladigunta, GUNTUR-522017

PRINCIPAL

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

Malineni Lakshmaiah Women's Engineering College

(Approved by AICTE & Affiliated to JNTUK, Kakinada)
Pulladigunta (V), Vatticherukuru(M), Guntur-522017
(ISO 9001: 2015 Certified)

DEPARTMENT OF SCIENCE AND HUMANITIES

SEM-II **A.Y. 19-20**

C114(BASIC ELECTRICAL ENGINEERING)

C114	BASIC ELECTRICAL ENGINEERING	3 0 0
C114.1	Understand the principle of operation, construction and details of DC generators	
C114.2	Understand the principle of operation, construction and details of DC motors	
C114.3	Learn the principle of operation, construction and performance of transformers	
C114.4	Study the principle of operation, construction and details of Synchronous machines	
C114.5	Learn the principle of operation, construction and performance of 3-phase Induction motors	

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C114.1	2	-	-	-	-	-	-	-	-	-	-	-
C114.2	2	-	-	-	-	-	-	-	-	-	-	-
C114.3	2	-	-	-	-	-	-	-	-	-	-	-
C114.4	2	-	-	-	-	-	-	-	-	-	-	-
C114.5	2	-	-	-	-	-	-	-	-	-	-	-
C114	2	-	-	-	-	-	-	-	-	-	-	-

SIGNATURE OF THE FACULTY

HOD

Dept. of Science & Humanities
Malineni Lakshmaiah Women's Engineering College
Pulladigunta, GUNTUR-522017

PRINCIPAL

MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

Malineni Lakshmaiah Women's Engineering College
(Approved by AICTE & Affiliated to JNTUK, Kakinada)
Pulladigunta (V), Vatticherukuru(M), Guntur-522017
(ISO 9001: 2015 Certified)

DEPARTMENT OF SCIENCE AND HUMANITIES

SEM-I **A.Y. 19-20**

C101(ENGLISH)

C101	ENGLISH	3 0 0
C101.1	Understanding how to communicate with native speakers of English.	
C101.2	Questioning and answering skills are improved	
C101.3	Reading and writing on an idea or text	
C101.4	Improving paragraph writing skills	
C101.5	Recalling forming sentences with proper grammar and correct word forms	

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101.1	-	-	-	-	-	-	-	-	-	2	-	-
C101.2	-	-	-	-	-	-	-	-	-	1	-	-
C101.3	-	-	-	-	-	-	-	-	-	2	-	-
C101.4	-	-	-	-	-	-	-	-	-	3	-	-
C101.5	-	-	-	-	-	-	-	-	-	1	-	-
C101	-	-	-	-	-	-	-	-	-	1.8	-	-

SIGNATURE OF THE FACULTY

HOD

Dept. of Science & Humanities
Malineni Lakshmaiah Women's Engineering College
Pulladigunta, GUNTUR-522017

PRINCIPAL

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

Malineni Lakshmaiah Women's Engineering College
(Approved by AICTE & Affiliated to JNTUK, Kakinada)
Pulladigunta (V), Vatticherukuru(M), Guntur-522017
(ISO 9001: 2015 Certified)

DEPARTMENT OF SCIENCE AND HUMANITIES

SEM-I

A.Y. 18-19

C104 (APPLIED PHYSICS)

C104	APPLIED PHYSICS	4 0 0
C104.1	Explain the need of coherent sources and the condition s for sustained interference.	
C104.2	Analyze different properties of light	
C104.3	Apply the concepts to learn the types of lasers	
C104.4	Illustrate the physical significance of wave functions	
C104.5	Interpret the direct and indirect band gap semi conductors	

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104.1	3	2	1	-	-	-	-	-	-	-	-	-
C104.2	2	3	1	-	-	-	-	-	-	-	-	-
C104.3	3	2	1	-	-	-	-	-	-	-	-	-
C104.4	3	2	1	-	-	-	-	-	-	-	-	-
C104.5	2	3	1	-	-	-	-	-	-	-	-	-
C104	2.6	2.4	1	-	-	-	-	-	-	-	-	-

SIGNATURE OF THE FACULTY

HOD

Dept. of S&H
Malineni Lakshmaiah Women's Engineering College
Pulladigunta, GUNTUR-522017

PRINCIPAL

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

Pulladigunta, Vatticherukurr Mandal, Guntur, Andhra Pradesh-522017

Approved by AICTE, New Delhi, Affiliated to JNTUK

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	C206
Course Name	:	Random Variables & Stochastic Processes
Academic Year	:	2017-2018
Semester	:	I
Regulation	:	R16
Name of the Faculty	:	K.HARIBABU

COURSE ASSESSMENT TOOLS

DIRECT ASSESSMENT								INDIRECT ASSESSMENT			
CIE				SEE	% THROUGH CIE & SEE			THROUGH CO FEEDBACK	% THROUGH DA & IDA		TOTAL
MID semester subjective type I & II	MID semester objective type I &II	Assignment I & II	TOTAL	Subjective type I	CIE	SEE	TOTAL		DA	IDA	DA + IDA
15M	10M	5M	30M	70M	30%	70%	100%	100%	80%	20%	100%

COURSE OUTCOMES :

After the completion of the course, the student will be able to

C206.1	Interpret the concepts of random variables and stochastic processes in real time applications
C206.2	Use the priniple definitions, fundamental theorem and important relations in statistics
C206.3	Describe about significance of Joint Distribution function, Joint Denstity function and Characteristic function
C206.4	Explain the concept of stationary and widesense stationary process and their significance and evaluate its condition
C206.5	Explain the concept of power density spectrum and cross power density spectrum of a random process
C206.6	Analyze linear systems with theory of stochastic processes

Course Articulation Matrix: Mapping Course Outcomes (COs) with Program Outcomes (POs)

COs/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C206.1	3	2	2	2									2	
C206.2	3	3	2	2									2	
C206.3	3	3	2	2									2	
C206.4	2	2	2	2									2	
C206.5	2	1	1	1									2	
C206.6	3	2	2	2									2	
AVG	2.6667	2.16667	1.8333	1.8333									2	

Program Outcomes & Program Specific Outcomes

PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: 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.
PO4	Use research-based knowledge and research methods including design of experiments, analysis, and interpretation of data and synthesis of information to provide valid conclusions
PSO1	Analyze real time problems and provide solutions in the field of advanced communications, signal, and image processing applications

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17,

Questions fall under corresponding CO in each Assessment Tool:

CO#	CIE						SEE
	MID 1	MID 2	QUIZ1	(ASSN1)	QUIZ2	(ASSN2)	
C206.1	1A,1B		APPLICABLE	APPLICABLE			APPLICABLE
C206.2	2A,2B		APPLICABLE	APPLICABLE			APPLICABLE
C206.3	Q3		APPLICABLE	APPLICABLE			APPLICABLE
C206.4		1A,2A,2B			APPLICABLE	APPLICABLE	APPLICABLE
C206.5		3A,3B			APPLICABLE	APPLICABLE	APPLICABLE

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

Pulladigunta, Vatticherukurr Mandal, Guntur, Andhra Pradesh-522017

Approved by AICTE, New Delhi, Affiliated to JNTUK

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	C213
Course Name	:	ANALOG COMMUNICATIONS
Academic Year	:	2017-18
Semester	:	II-II
Regulation	:	R16
Name of the Faculty	:	K.GOUTHAMI

COURSE ASSESSMENT TOOLS

DIRECT ASSESSMENT								INDIRECT ASSESSMENT			
CIE				SEE	% THROUGH CIE & SEE			THROUGH CO FEEDBACK	% THROUGH DA & IDA		TOTAL
MID semester - subjective type I & II	MID semester objective type I &II	Assignment I & II	TOTAL	Subjective type-I	CIE	SEE	TOTAL		DA	IDA	DA + IDA
15M	10M	5M	30M	70M	30%	70%	100%	100%	80%	20%	100%

COURSE OUTCOMES :

.fter the completion of the course, the student will be able to

C213.1	Demonstrate the need for modulation and also the basic blocks and circuits present in a communication system, square law and switching modulator and demodulators
C213.2	Distinguish various analog modulation techniques like DSB, SSB and VSB with their generation, detection methods and also system performance in presence of Noise
C213.3	Analyze Frequency modulators and Demodulators with their spectrum, average power, band width, and also with AM
C213.4	Sketch the AM, FM radio transmitter and receiver circuits with the role of AGC /AFC
C213.5	Discriminate different types of pulse analog modulation Techniques such as PAM,PWM and PPM with their modulation and Demodulation methods

Course Articulation Matrix: Mapping Course Outcomes (COs) with Program Outcomes (POs)

COs/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C213.1	1	2	3	2	1	2							2	
C213.2	1	2	3	3	2	1							2	
C213.3	1	3	3	2	1	1							2	
C213.4	2	2	3	2	2	2							2	
C213.5	2	3	3	3	2	2							3	
AVG	1.4	2.4	3	2.4	1.6	1.6							2.2	

Program Outcomes & Program Specific Outcomes

PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: 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.
PO4	Modern tool usage: 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.
PO5	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
PO6	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice
PSO1	Analyze real time problems and provide solutions in the field of advanced communications, signal and image processing applications.

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

Pulladigunta, Vatticherukurr Mandal, Guntur, Andhra Pradesh-522017

Approved by AICTE, New Delhi, Affiliated to JNTUK

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	R1631043/C304
Course Name	:	Digital IC Applications
Academic Year	:	2019-20
Semester	:	I SEM
Regulation	:	R16
Name of the Faculty	:	VENKATARAO T

COURSE ASSESSMENT TOOLS

DIRECT ASSESSMENT								INDIRECT ASSESSMENT			
CIE				SEE	% THROUGH CIE & SEE			THROUGH CO FEEDBACK	% THROUGH DA & IDA		TOTAL
MID semester subjective type I & II	MID semester objective type I &II	Assignment I & II	TOTAL	Subjective type-I	CIE	SEE	TOTAL		DA	IDA	DA + IDA
15M	10M	5M	30M	70M	30%	70%	100%	100%	80%	20%	100%

COURSE OUTCOMES :

After the completion of the course, the student will be able to

C303.1	Analyze the commercially available digital integrated circuit families.
C303.2	Apply the knowledge of hardware description language (VHDL) concept to model the any digital circuit.
C303.3	Illustrate combinational and sequential logic circuits using different ICs.
C303.4	Develop and synthesis the HDL code for combinational and sequential circuits.
C303.5	Test for the functionality of combinational and sequential circuits using EDA tools.

Course Articulation Matrix: Mapping Course Outcomes (COs) with Program Outcomes (POs)

COs/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C303.1	2	3	3											2
C303.2	3	2	3	3										3
C303.3	3	3	3	3										2
C303.4	3	3	3	3										2
C303.5	2	2	3	3	3							1		3
AVG	2.6	2.6	3	3	3							1		2.4

Program Outcomes & Program Specific Outcomes

O1	Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems
PO2	Identify, formulates, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
PO3	Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations
PO4	Use research-based knowledge and research methods including design of experiments, analysis, and interpretation of data and synthesis of information to provide valid conclusions.
PO5	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
PO12	Recognize the need for and have the preparation and ability to Engage in independent and lifelong learning in the broadest context of Technological Change.
PSO2	Analyze and develop the components of a system or sub-system using the concepts of embedded systems and VLSI technology

PRINCIPAL
MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE PULLADIGUNTA, GUNTUR-17, A.P.

Questions fall under corresponding CO in each Assessment Tool:

CO#	CIE						SEE
	MID 1	MID 2	QUIZ1	(ASSN1)	QUIZ2	(ASSN2)	
C303.1	M1-Q1A (3M) M1-Q1B (2M)		applicable	applicable			applicable
C303.2	M1-Q2A (3M) M1-Q2B (2M) M1-Q3 (5M)		applicable	applicable			applicable

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

Pulladigunta, Vatticherukurr Mandal, Guntur, Andhra Pradesh-522017

Approved by AICTE, New Delhi, Affiliated to JNTUK

ESTD: 2008

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	C311
Course Name	:	MICROWAVE ENGINEERING
Academic Year	:	2018-19
Semester	:	III-II
Regulation	:	R16
Name of the Faculty	:	K. RAVI KUMAR

COURSE ASSESSMENT TOOLS

DIRECT ASSESSMENT								INDIRECT ASSESSMENT			
CIE				SEE	% THROUGH CIE & SEE			THROUGH CO FEEDBACK	% THROUGH DA & IDA		TOTAL
MID semester subjective type I & II	MID semester objective type I &II	Assignment I & II	TOTAL	Subjective type-I	CIE	SEE	TOTAL		DA	IDA	DA + IDA
15M	10M	5M	30M	70M	30%	70%	100%	100%	80%	20%	100%

COURSE OUTCOMES :

After the completion of the course, the student will be able to

C311.1	Discuss different modes in waveguide structures
C311.2	Illustrate Rectangular and Circular Waveguides
C311.3	IllustrateRectangular and Circular Resonators
C311.4	Calculate S-matrix for various waveguide components and Develop the splitting of the microwave energy in a desired direction
C311.5	Distinguish between Microwave tubes and Solid State Devices
C311.6	Calculate various microwave parameters

Course Articulation Matrix: Mapping Course Outcomes (COs) with Program Outcomes (POs)

COs/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C311.1	3	3	3										3	
C311.2	3	3	3										3	
C311.3	3	3	3									2	3	
C311.4	3	3	3									2	3	
C311.5	3	3	3									2	3	
C311.6	3	3	3									2	3	
AVG	3	3	3									2	3	

Program Outcomes & Program Specific Outcomes

PO1	Apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems
PO2	Identity, formulates, research literature and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
PO3	Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations
PO12	Recognize the need for and have the preparation and ability to Engage in independent and lifelong learning in the broadest context of Technological Change
PSO1	Analyze real time problems and provide solutions in the field of advanced communications, signal, and image processing applications

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17,

Questions fall under corresponding CO in each Assessment Tool:

CO#	CIE						SEE
	MID 1	MID 2	QUIZ1	(ASSN1)	QUIZ2	(ASSN2)	
C311.1	Q1A		applicable	applicable	applicable	applicable	
C311.2	Q1B		applicable	applicable	applicable	applicable	
C311.3	Q2A, Q2B		applicable	applicable	applicable	applicable	
C311.4		Q2A	applicable	applicable	applicable	applicable	
C311.5	Q3A,Q3B	Q1A,Q1B,Q3A	applicable	applicable	applicable	applicable	

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

Pulladigunta, Vatticherukurr Mandal, Guntur, Andhra Pradesh-522017

Approved by AICTE, New Delhi, Affiliated to JNTUK

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	C405
Course Name	:	Electronic Switching Systems
Academic Year	:	2019-2020
Semester	:	I SEM
Regulation	:	R16
Name of the Faculty	:	G.MOUNICA

COURSE ASSESSMENT TOOLS

DIRECT ASSESSMENT								INDIRECT ASSESSMENT			
CIE				SEE	% THROUGH CIE & SEE			THROUGH CO FEEDBACK	% THROUGH DA & IDA		TOTAL
MID semester subjective type I & II	MID semester objective type I &II	Assignment I & II	TOTAL	Subjective type-I	CIE	SEE	TOTAL		DA	IDA	DA + IDA
15M	10M	5M	30M	70M	30%	70%	100%	100%	80%	20%	100%

COURSE OUTCOMES :

After the completion of the course, the student will be able to

C405.1	Evaluate the time and space parameters of a switched signal
C405.2	Describe the digital signal path in time and space, between two terminals
C405.3	Evaluate the inherent facilities within the system to test some of the SLIC, CODEC and digital switch functions.
C405.4	Investigate the traffic capacity of the system.
C405.5	Evaluate methods of collecting traffic data.
C405.6	Evaluate the method of interconnecting two separate digital switches.

Course Articulation Matrix: Mapping Course Outcomes (COs) with Program Outcomes (POs)

COs/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C405.1	2	2	1	1										1
C405.2	2	3	3	3										1
C405.3	2	3	3	3										1
C405.4	3	3	3	3										2
C405.5	3	3	3	3										2
C405.6	3	3	3	3								3		2
avg	2.5	2.8333	2.667	2.667								3		1.5

Program Outcomes & Program Specific Outcomes

PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/development of solutions: 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.
PO4	Modern tool usage: 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.
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.
PSO1	Analyze real time problems and provide solutions in the field of advanced communications, signal, and image processing applications.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

Pulladigunta, Vatticherukurr Mandal, Guntur, Andhra Pradesh-522017

Approved by AICTE, New Delhi, Affiliated to JNTUK

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	C410
Course Name	:	ELECTRONIC MEASUREMENT AND INSTRUMENTATION
Academic Year	:	2019-2020
Semester	:	II SEM
Regulation	:	R16
Name of the Faculty	:	K.RAJITHA

COURSE ASSESSMENT TOOLS

DIRECT ASSESSMENT								INDIRECT ASSESSMENT			
CIE				SEE	% THROUGH CIE & SEE			THROUGH CO FEEDBACK	% THROUGH DA & IDA		TOTAL
MID semester subjective type I & II	MID semester objective type I &II	Assignment I & II	TOTAL	Subjective type-I	CIE	SEE	TOTAL		DA	IDA	DA + IDA
15M	10M	5M	30M	70M	30%	70%	100%	100%	80%	20%	100%

COURSE OUTCOMES :

After the completion of the course, the student will be able to

C410.1	Apply the acquired knowledge of measuring instrumentations to measure in a complx design
C410.2	Analyze the available oscilloscopes to measure of various signal
C410.3	identify the appropriate transducers among available transducer to design project
C410.4	analyze various bridge circuits for the measurement of physical quantities to minimize errors in measurements
C410.5	inspect data acquisition systems and to apply for instrumentation in industrial

Course Articulation Matrix: Mapping Course Outcomes (COs) with Program Outcomes (POs)

COs/ POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C410.1	2	3	3											1
C410.2	3	2	3	3										1
C410.3	3	3	3	3										1
C410.4	3	3	3	3										1
C410.5	2	2	3											1
AVG	2.6	2.6	3	3										1

Program Outcomes & Program Specific Outcomes

PO1:	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2:	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3:	Design/development of solutions: 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.
PO4:	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PSO1:	Analyze real time problems and provide solutions in the field of advanced communications, signal, and image processing applications.

Questions fall under corresponding CO in each Assessment Tool:

CO#	CIE						SEE
	MID 1	MID 2	QUIZ1	(ASSN1)	QUIZ2	(ASSN2)	
C410.1	1A,1B		APPLICABLE	APPLICABLE			APPLICABLE
C410.2	2A,2B		APPLICABLE	APPLICABLE			APPLICABLE
C410.3	3A,3B		APPLICABLE	APPLICABLE			APPLICABLE
C410.4		Q1			APPLICABLE	APPLICABLE	APPLICABLE
C410.5		2A,2B,Q3			APPLICABLE	APPLICABLE	APPLICABLE

PRINCIPAL
MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-19

Malineni Lakshmaiah Women's Engineering College

(Approved by AICTE & Affiliated to JNTUK, Kakinada)
Pulladigunta (V), Vatticherukuru(M), Guntur-522017
(ISO 9001: 2015 Certified)

DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

CO'S AND PO'S MAPPING

2019-2020

SEM-III

A.Y. 19-20
C-301(STRATEGIC MANAGEMENT)

C-301	STRATEGIC MANAGEMENT	3 0 0
C-301.1	Understand the concept of strategic management and develop vision, mission and objectives of the organization.	
C-301.2	Know the industry analysis and develop techniques of competitive analysis	
C-301.3	Appraise strategic leadership styles and actions.	
C-301.4	Formulate effective strategies in business.	
C-301.5	Develop a frame work for the implementation strategies in business.	

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C-301.1	-	-	-	-	-	2	-	-	-	-	-	-
C-301.2	-	-	-	-	-	-	-	-	2	-	-	-
C-301.3	-	-	-	-	-	-	-	-	2	-	-	-
C-301.4	-	-	-	-	-	-	-	-	3	-	-	-
C-301.5	-	-	-	-	-	-	-	-	-	-	2	-
C-301	-	-	-	-	-	2	-	-	2.1	-	-	-

SIGNATURE OF THE FACULTY

HOD

PRINCIPAL

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-

Malineni Lakshmaiah Women's Engineering College
(Approved by AICTE & Affiliated to JNTUK, Kakinada)
Pulladigunta (V), Vatticherukuru(M), Guntur-522017
(ISO 9001: 2015 Certified)

DEPARTMENT OF MASTER OF BUSINESS ADMINISTRATION

CO'S AND PO'S MAPPING

2019-2020

SEM-IV

A.Y. 19-20

C-402(ENTREPRENEURSHIP DEVELOPMENT)

C-301	**STRATEGIC MANAGEMENT**	3 0 0
C-402.1	Understand the concepts, role and importance of entrepreneurship.	
C-402.2	Outline women entrepreneurship and qualities.	
C-402.3	Define entrepreneurship development programs in India and contents for training for entrepreneurial competencies.	
C-402.4	Create appropriate business models and develop well-presented business plan that is feasible for the student.	
C-402.5	Understand the concept of small and micro enterprises.	

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C-402.1	-	-	-	-	-		1	1	-	-	-	-
C-402.2	-	-	-	-	-	-	-	-		-	-	-
C-402.3	-	-	-	-	-	-	-	-		2	-	-
C-402.4	-	-	-	-	-	-	1	-		1	-	1
C-402.5	-	-	-	-	-	-	-	-	-	1		-
	-	-	-	-	-		1	-		1.3	-	1

SIGNATURE OF THE FACULTY

HOD

PRINCIPAL

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17,

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

2017-2018

DATA STRUCTURES THROUGH C++

COURSE : **DATA STRUCTURES THROUGH C++**	DEGREE: **B.Tech**
COURSE CODE: **R1621055**	YEAR: **II** SEMESTER: **I**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2017-2018**	CREDITS: **3**

After the completion of course, the student will be able to:

CO No.	Course Outcome Statement	Taxonomy Level
C205.1	Illustrate the ADTs of Polynomial, Sparse matrix, transposing of matrix and matrix multiplications by using arrays.	Understand
C205.2	Perform various operations of stack and queue by using arrays.	Apply
C205.3	Implement various matrices, polynomials, stack and queue by using linked lists	Apply
C205.4	Implement different hierarchical forms of data and perform various operations in BST, tree traversals.	Apply
C205.5	Analyze graph traversal techniques of DFS,BFS and minimum cost spanning Trees.	Analyze
C205.6	Compare various searching and sorting techniques with their complexities.	Analyze

PRINCIPAL
MALINENI LAKSHMAIAH
OMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

CO: PO and PSO Mapping

Mapping of course outcomes with program outcomes:
Strong -3 Moderate -2 Slight -1

PO / CO	DS through C++	2017-2018	4	0	0	3	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C205.1	Illustrate the ADTs of Polynomial, Sparse matrix, transposing of matrix and matrix multiplications by using arrays.						3	2	-	-	-									
C205.2	Perform various operations of stack and queue by using arrays.						3	2	-	-	-									
C205.3	Implement various matrices, polynomials, stack and queue by using linked lists.						3	2	-	-	-									
C205.4	Implement different hierarchical forms of data and perform various operations in BST, tree traversals.						3	2	2	2	-									2
C205.5	Analyze graph traversal techniques of DFS,BFS and minimum cost spanning Trees.						2	3	2	-	-									2

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

C205.6	Compare various searching and sorting techniques with their complexities.	2	3	2											2
TOTAL		16	14	6	2										6
No of Co's Mapping With Po/Pso		6	6	3	1	-	-								3

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

2017-2018

COMPUTER GRAPHICS

COURSE : **COMPUTER GRAPHICS**	DEGREE: **B.Tech**
COURSE CODE: **R1621056**	YEAR: **II** SEMESTER: **I**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2017-2018**	CREDITS: **3**

After the completion of course, the student will be able to:

CO No.	Course Outcome Statement	Taxonomy Level
C206.1	Make Use of algorithms for drawing line, circle , eclipse and clipping algorithms for line, polygon, text and curve.	Apply
C206.2	Interpret 3D objects representation, viewing, visible surface identification, Animations, complex objects for fractals and self similarity, peano curves, Julia sets.	Understand
C206.3	Types of different Colour models	Understand
C206.4	Build graphic primitives by using OPENGL.	Apply
C206.5	Contrast shading methods for detect objects, rendering texture and drawing shadows.	Analyze
C206.6	Know the ray tracing method for graphic primitives and perform Boolean operations on objects .	Understand

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

CO: PO and PSO Mapping

Mapping of course outcomes with program outcomes:
Strong -3 Moderate -2 Slight -1

PO / CO	CG	2017-2018	4	0	0	3	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
C206.1	Make Use of algorithms for drawing line, circle , eclipse and clipping algorithms for line, polygon, text and curve.						3	2	-	-	-								2	
C206.2	Interpret 3D objects representation and visible surface identification, complex objects for fractals, peano curves, Julia sets.						2	3	-	-	-									
C206.3	Types of different Colour models						3	2												
C206.4	Build graphic primitives by using OPENGL.						3	2	2	-	-								2	
C206.5	Contrast shading methods for detect objects, rendering texture and drawing shadows.						2	3	2	-	-									

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

C206.6	Know the ray tracing method for graphic primitives and perform Boolean operations on objects .	2	3	2	-	-									
TOTAL		15	15	6										4	
No of Co's Mapping With Po/Pso		6	6	3										2	
Average		2.5	2.5	2										2	

MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

2018-2019

Advanced Data Structure

COURSE : **Advanced Data Structure**	DEGREE: **B.Tech**
COURSE CODE: **R1622053**	YEAR: **II** SEMESTER: **II**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2018-2019**	CREDITS: **3**

After the completion of course, the student will be able to:

CO No.	Course Outcome Statement	Taxonomy Level
C211.1	Apply sorting Techniques on different data	Apply
C211.2	Apply Hashing Technique for different the data performing operations	Apply
C211.3	Design priority Queues using heaps	Analyse
C211.4	Design of Binary Search Tree	Analyse
C211.5	Design of multi way Searching Tree.	Analyze
C211.6	Summarize the application of data search technique..	Understand

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

CO: PO and PSO Mapping

Mapping of course outcomes with program outcomes:
Strong -3 Moderate -2 Slight -1

PO / CO	CNS 2019-2020 4 0 0 3	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO 2
C221.1	Perform sorting Techniques on different data	2	2	3		-								2	
C211.2	. Apply Hashing Technique for different the data performing operation	2	2	3	2									2	
C211.3	Design priority Queues using heaps	2	2	3		-									
C211.4	Design of Binary Search Tree	2	2	3		-									
C211.5	Design of multi way Searching Tree.	2	2	3	-	-									
C211.6	Understanding the application of data search technique.	3		2											
TOTAL		13	10	17	2	-								4	
No of Co's Mapping With Po/Pso		6	5	6	1	-	-							2	
Average		2.1	2	2.8	0.5										

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

2018-2019

PRINCIPLES OF PROGRAMMING LANGUAGES

COURSE : **PRINCIPLES OF PROGRAMMING LANGUAGES**	DEGREE: **B.Tech**
COURSE CODE: **C214**	YEAR: **II** SEMESTER: **II**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2018-2019**	CREDITS: **3**

After the completion of course, the student will be able to:

CO No.	Course Outcome Statement	Taxonomy Level
C214.1	Describe the syntax, semantics and basic constructs of programming languages **Key elements:** Useful knowledge in lexical analysis and parsing phases of a compiler and Understand about data types, operators, control flow statements.	Understanding
C214.2	Design of sub programs in various programming languages **Key elements:** Apply function calls and execute stack applications.	Apply
C214.3	Apply object oriented concepts **Key elements:** Design sub programs, Implement the concurrency, exception and event handling mechanisms.	Apply
C214.4	Analyze functional program using ML(meta language) **Key elements:** Design inference rules and implement lambda calculus, procedures.	Analyze

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

CO: PO and PSO Mapping

Mapping of course outcomes with program outcomes:
Strong -3 Moderate -2 Slight -1

C214	Principles of Programming Languages	2016 - 2017	4	0	0	3	PO 1	PO 2	PO 3	PO4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO 2
C214.1	Describe the syntax, semantics and basic constructs of programming languages **Key elements:** Useful knowledge in lexical analysis and parsing phases of a compiler and Understand about data types, operators, control flow statements						2	2	3	-	-							-		
C214.2	Design of sub programs in various programming languages **Key elements:** Apply function calls and execute stack applications.						2	2	3	2	-	-	-	-	-	-	-	2	-	2
C214.3	Apply object oriented concepts **Key elements:** Design sub programs, Implement the concurrency, exception and event handling						2	2	2	3	-	-	-	-	-	-	-	2	-	2

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

	mechanisms.														
C214.4	Analyze functional program using ML(meta language) **Key elements:** Design inference rules and implement lambda calculus, procedures.	2	2	2	2	3		-	-	-	-	-	2	-	2
Total		10	10	12	9	6							8		8
No. Of CO mapping with PO		5	5	5	4	2							4		4
Average		2	2	2.4	2.25	3							2		2

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

2019-2020

COURSE OUTCOMES WITH PO & PSO MAPPING

COURSE : **OPERATING SYSTEM**	DEGREE: **B.Tech**
SUBJECT CODE: **R1631055**	YEAR: **III** SEMESTER: **I**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2019-20**	CREDITS: **3**

After the completion of course, the student will be able to

CO No.	Course Outcome Statement	Taxonomy Level
C305.1	Apply the operating system resources, services, processes and scheduling algorithms for system management	Apply
C305.2	Compare various memory management schemes and solve page replacement algorithms in memory management for efficient storage of data	Analyze
C305.3	Apply the principles of concurrency, deadlock prevention and avoidance algorithm to increase the system performance	Apply
C305.4	Solve issues related to file system interface, file system implementation and disk management for better utilization of memory	Apply
C305.5	Analyze administrative tasks on Linux Server and Android operating system for developing applications	Analyze

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

CO: PO and PSO Mapping

Mapping of course outcomes with program outcomes:

Strong -3 Moderate -2 Slight -1

PO / CO	OS 2019- 20 4 0 0 3	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C305.1	Apply the operating system resources, services, processes and scheduling algorithms for system management	2	3	1	1										
C305.2	Compare various memory management schemes and solve page replacement algorithms in memory management for efficient storage of data	1	2	-	-										
C305.3	Apply the principles of concurrency, deadlock prevention and avoidance algorithm to increase the system performance	2	2	-	-										
C305.4	Solve issues related to file system interface, file system implementation and disk management	2	3	2	1										

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

	for better utilization of memory														
C305.5	Analyze administrative tasks on Linux Server and Android operating system for developing applications	2	2	3	1										
TOTAL		9	12	6	3										
No of Co's Mapping with Po/Pso		5	5	3	3										
Average		1.8	2.4	2	1										

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India
Department of Computer Science and Engineering

COURSE : **Software Testing Methodologies**	DEGREE: **B.Tech**
COURSE CODE: **R1632054**	YEAR: **III** SEMESTER: **II**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2019-2020**	CREDITS: **3**

After the completion of course, the student will be able to:

Co. No.	Course Outcome Statement	Taxonomy Level
C313.1	Know the basic concepts of software testing and its essentials	Understand
C313.2	Perform functional testing using transaction flow and control flow graphs.	Apply
C313.3	Test a domain or an application and identifying the nice and ugly domains.	Analyze
C313.4	Classify a path expression and reduce them very well when needed.	Analyze
C313.5	Apply an effective, step-by-step process for identifying needed areas of testing, designing test conditions and building and executing test cases.	Apply
C313.6	Apply appropriate software testing tools, techniques and methods for even more effective systems during both the test planning and test execution phases of a software development project.	Apply

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-7.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
(An ISO9001:2008 Certified Institution)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India
Department of Computer Science and Engineering

JUSTIFICATION FOR CO-PO-PSO CORRELATION:

Mapping of course outcomes with program outcomes:

Strong -3 Moderate -2 Slight -1

CO/PO	STM	2019-20	4	0	0	3	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C313.1	Know the basic concepts of software testing and its essentials						3				2							2		2
C313.2	Performing functional testing using transaction flow and control flow graphs.						3	3	3		3							3		2
C313.3	Able to test a domain or an application and identifying the nice and ugly domains.						3	3	3	2	2							2		3
C313.4	Able to make a path expression and reduce them very well when needed.						3		2		2							2		
C313.5	Follow an effective, step-by-step process for identifying needed areas of testing, designing test conditions and building and executing test cases.						2	2		2								2		2
C313.6	Apply appropriate software testing tools, techniques and methods for even more effective systems during both the test planning and test execution phases of a software development project.						2		2									2		2
TOTAL							16	8	10	4	9							13		11
No of Co's Mapping With Po/Pso							6	3	4	2	4							6		5
Average							2.6	2.6	2.5	2	2.25							2.16		2.2

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

Department of Computer Science and Engineering

COURSE : **DATA WAREHOUSING AND MINING**	DEGREE: **B.Tech**
COURSE CODE: **R1632052**	YEAR: **III** SEMESTER: **II**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2020-2021**	CREDITS: **3**

COURSE OBJECTIVES & OUTCOMES

COURSE OBJECTIVE:

S.NO	COURSE OBJECTIVE
1	Students will be enabled to understand and implement classical models and algorithms in data warehousing and data mining.
2	They will learn how to analyze the data, identify the problems, and choose the relevant models and algorithms to apply.
3	They will further be able to assess the strengths and weaknesses of various methods and algorithms and to analyze their behavior.

COURSE OUTCOME:
Students will be able to:

CO.NO	Description
1	Understand stages in building a Data Warehouse.
2	Understand the need and importance of preprocessing techniques.
3	Understand the need and importance of Similarity and dissimilarity techniques
4	Analyze and evaluate performance of algorithms for Association Rules.
5	Analyze Classification and Clustering algorithms.

Course Instructor

P. Venu Babu
Program Coordinator

HOD

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17,

HOD
Computer Science & Engg.
Malineni Lakshmaiah Women's Engg. Coll.
PULLADIGUNTA, GUNTUR-522 017

MALINENI LAKSHMAIAH WOMEN'S ENGINEERING COLLEGE

(Approved by AICTE, Affiliated to JNTUK)
Pulladigunta (Village), Vatticherukuru (Mandal),
Guntur-522017, Andhra Pradesh, India

ESTD : 2008

Department of Computer Science and Engineering

COURSE : **DATA WAREHOUSING AND DATA MINING**	DEGREE: **B.Tech**
COURSE CODE: **R1632052**	YEAR: **III** SEMESTER: **II**
REGULATION: **R16**	COURSE TYPE: **REGULAR**
ACADEMIC YEAR : **2020-2021**	CREDITS: **3**

After the completion of course, the student will be able to:

CO No.	Course Outcome Statement	Taxonomy Level
C310.1	Understand stages in building a Data Warehouse	Understand
C310.2	Understand the need and importance of pre-processing techniques	Understand
C310.3	Analyze Classification Techniques.	Analyze
C310.4	Analyze and evaluate performance of algorithms for Association Rules.	Analyze
C310.5	Analyze Clustering algorithms.	Analyze

PRINCIPAL
MALINENI LAKSHMAIAH
WOMEN'S ENGINEERING COLLEGE
PULLADIGUNTA, GUNTUR-17.