SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	ENGLISH
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/I
Regulation:	R19
Subject Code:	HS1101
Name of the Faculty:	Y.PULLAREDDY

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To facilitate effective listening skills for better comprehension of academic lectures	Apply
CO 2	Focus on appropriate reading strategies for comprehension of various academic texts	Apply
CO 3	Help improve speaking skills through participation in activities such as role plays, discussion and structured talks	Apply
CO 4	Impart effective strategies for good writing and demonstrate the same in summarizing.	Apply
CO 5	Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech	Remember

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	1	-	-	-	-	-	3	3	2	-	-	-	2	2
CO2	1	-	-	-	-	-	3	3	2	-	-	-	2	2
CO3	1	-	-	-	-	-	3	3	2	-	-	-	2	2
CO4	1	-	-	-	-	-	3	3	2	-	-	-	2	2
CO5	1	-	-	-	-	-	3	3	2	-	-	-	2	2
Course	**1**	**-**	**-**	**-**	**-**	**-**	**3**	**3**	**2**	**-**	**-**	**-**	**2**	**2**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering

Course outcome mapping with PO's and PSO's

Course Title:	Engineering Drawing
Programme:	B.Tech
Academic Year	2019-2020
Year/Semester:	I-I
Regulation:	R19
Subject Code:	ES1103
Name of the Faculty:	V.Ramachandrarao

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To introduce the students to use drawing instruments and to draw polygons, Engg. Curves.	Apply
CO 2	To introduce the students to use orthographic projections, projections of points & simple lines. To make the students draw the projections of the lines inclined to both the planes.	Apply
CO3	The objective is to make the students draw the projections of the plane inclined to both the planes.	Apply
CO4	The objective is to make the students draw the projections of the various types of solids in different positions inclined to one of the planes.	Apply
CO 5	The objective is to represent the object in 3D view through isometric views. The student will be able to represent and convert the isometric view to orthographic view and vice versa.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	2	3	-	-	-	-	-	-	-	-	2	2	2
CO2	3	2	2	-	-	-	-	-	-	-	-	2	3	2
CO3	2	2	3	-	-	-	-	-	-	-	-	2	2	2
CO4	3	2	2	-	-	-	-	-	-	-	-	2	3	2
CO5	3	2	2	-	-	-	-	-	-	-	-	2	3	2
Course	**2.6**	**2**	**2.4**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**2.6**	**2**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering

Course outcome mapping with PO's and PSO's

Course Title:	MATHEMATICS-1
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/I
Regulation:	R19
Subject Code:	BS1101
Name of the Faculty:	D.SAIPRATAP

I.   COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Utilize mean value theorems to real life problems	Apply
CO 2	Solve the differential equations of first order related to various engineering fields	Apply
CO 3	Solve the differential equations second and higher order related to various engineering fields	Apply
CO 4	Calculate total derivative, Jacobian and familiarize with functions of several variables which is useful in optimization	Apply
CO 5	Apply double integration techniques in evaluating areas bounded by region	Apply

II.   CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	2	2	-	-	-	-	-	2	2	2	2
CO2	3	3	3	2	1	-	-	-	-	-	1	2	2	2
CO3	3	3	3	2	2	-	-	-	-	-	1	2	2	2
CO4	2	3	3	2	2	-	-	-	-	-	2	2	2	2
CO5	2	3	3	2	1	-	-	-	-	-	2	2	2	2
Course	**2.6**	**3**	**3**	**2**	**1.6**	**-**	**-**	**-**	**-**	**-**	**1.6**	**2**	**2**	**2**

Faculty Signature

Course Title:	Programming for Problem Solving using C
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/I
Regulation:	R19
Subject Code:	ES1101
Name of the Faculty:	G.V.RAMANA

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Formulate algorithm/flowchart for given arithmetic and logical problem	Understand
CO 2	Translate algorithm/flowchart into C program using correct syntax and execute it	Illustrate
CO 3	Write programs using Analyze the different operators, Selection & Making Decisions Statements and Loops Concepts with Programming Examples.	Analyze
CO 4	Understand the concept of Array, Strings and Enumerated, Structure, and Union to solve different problems	Understand
CO 5	Analyze the concepts of Pointers, memory allocation Functions with programming Applications.	Analyze
CO 6	To decompose a problem into functions and to develop modular reusable code and apply File I/O operations	Apply

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	3	1	-	-	-	-	-	-	-	2	2	2
CO2	3	2	2	1	-	-	-	-	-	-	-	2	3	2
CO3	2	2	3	1	-	-	-	-	-	-	-	2	2	2
CO4	3	2	2	1	-	-	-	-	-	-	-	2	3	2
CO5	3	2	3	1	-	-	-	-	-	-	-	2	3	2
CO6	2	2	2	1	-	-	-	-	-	-	-	2	2	2
Course	**2.6**	**2**	**2.5**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**2.5**	**2**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	ENGLISH-LAB
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/I
Regulation:	R19
Subject Code:	HS1102
Name of the Faculty:	Y.PULLA REDDY

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Vowels , Consonants, Pronunciation Phonetic transcription	Apply
CO 2	Past tense marker, Word stress	Apply
CO 3	Rhythm and Intonation	Apply
CO 4	Contrastive stress	Apply
CO 5	Word stress, stress in compound words	Remember

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	-	-	-	-	-	3	3	2	-	-	-	2	2
CO2	2	-	-	-	-	-	3	3	2	-	-	-	2	2
CO3	2	-	-	-	-	-	3	3	2	-	-	-	2	2
CO4	2	-	-	-	-	-	3	3	2	-	-	-	2	2
CO5	2	-	-	-	-	-	3	3	2	-	-	-	2	2
Course	**2**	**-**	**-**	**-**	**-**	**-**	**3**	**3**	**2**	**-**	**-**	**-**	**2**	**2**

Faculty Signature

Course Title:	Programming for Problem Solving using C Lab
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/I
Regulation:	R19
Subject Code:	ES1102
Name of the Faculty:	G.V.RAMANA

I. COURSE OUTCOMES (COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Develop C programs for simple applications making use of basic constructs	Develop
CO 2	Apply the concept of conditionals and loops in C programs.	Apply
CO 3	Develop the C programs with arrays and strings.	Develop
CO 4	Apply the concept of functions, recursion in C programs	Apply
CO 5	Analyze the concept of pointers, and structures in C	Analyze
CO 6	Examine the use of sequential and random access file processing.	Apply

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	2	-	-	-	-	-	-	-	2	1	-
CO2	3	2	2	1	-	-	-	-	-	-	-	2	2	2
CO3	3	3	3	2	-	-	-	-	-	-	-	2	1	2
CO4	3	2	2	1	-	-	-	-	-	-	-	2	2	1
CO5	3	3	3	2	-	-	-	-	-	-	-	2	2	1
CO6	3	2	2	1	-	-	-	-	-	-	-	2	1	2
Course	3	2.5	2.5	1.5	-	-	-	-	-	-	-	2	1.5	1.6

Faculty Signature

Department of Electronics and Communication Engineering

Course outcome mapping with PO's and PSO's

Course Title:	Engineering Drawing
Programme:	B.Tech
Academic Year	2019-2020
Year/Semester:	I-I
Regulation:	R19
Subject Code:	ES1103
Name of the Faculty:	V.Ramachandrarao

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To introduce the students to use drawing instruments and to draw polygons, Engg. Curves.	Apply
CO 2	To introduce the students to use orthographic projections, projections of points & simple lines. To make the students draw the projections of the lines inclined to both the planes.	Apply
CO3	The objective is to make the students draw the projections of the plane inclined to both the planes.	Apply
CO4	The objective is to make the students draw the projections of the various types of solids in different positions inclined to one of the planes.	Apply
CO 5	The objective is to represent the object in 3D view through isometric views. The student will be able to represent and convert the isometric view to orthographic view and vice versa.	Analyze

II.CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	2	3	-	-	-	-	-	-	-	-	2	2	2
CO2	3	2	2	-	-	-	-	-	-	-	-	2	3	2
CO3	2	2	3	-	-	-	-	-	-	-	-	2	2	2
CO4	3	2	2	-	-	-	-	-	-	-	-	2	3	2
CO5	3	2	2	-	-	-	-	-	-	-	-	2	3	2
Course	2.6	2	2.4	-	-	-	-	-	-	-	-	2	2.6	2

Faculty Signature

Course Title:	ENGINEERING / APPLIED CHEMISTRY LABORATORY
Programme:	B.Tech
Academic Year	2019-2020
Year/Semester:	I/I
Regulation:	R19
Subject Code:	BS1107
Name of the Faculty:	N.V.Narasimha Rao

I. COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Introduction to Chemistry laboratory – Molarity, Normality, Primary, secondary standard solutions, Volumetric titrations, Quantitative analysis, Qualitative analysis, etc.	understand
CO 2	The experiments introduce volumetric analysis; redox titrations with different indicators; EDTA titrations; then they are exposed to a few instrumental methods of chemical analysis.	Analyse
CO3	Thus at the end of the lab course, the student is exposed to different methods of chemical analysis and use of some commonly employed instruments.	understand
CO4	They thus acquire some experimental skills. Standardized solutions using titrations, conductivity meter, PH METER	Apply

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	-	2	-	-	-	-	-	-	-	3	2	3
CO2	-	3	3	-	-	3	2	-	-	-	-	3	3	2
CO3	2	3	-	-	-	-	2	-	-	-	-	3	2	2
CO4	2	-	-	3	-	-	-	-	-	-	-	2	3	2
Course	2.3	2.6	3	2.5	-	3	2	-	-	-	-	2.8	2.5	2.3

Faculty Signature

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	ELECTRONIC DEVICES &CIRCUITS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-I
Regulation:	R19
Subject Code:	**R1621041**
Name of the Faculty:	K VENKANNA

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To study the characteristics of semiconductor devices and acquire basic knowledge on the working of various semi-conductor devices	Apply
CO 2	Study the characteristics of different semiconductor devices like diode, Zener, UJT etc experimentally	Understand
CO 3	Study the characteristics of Rectifiers and Filters experimentally	Understand
CO 4	Acquire in-depth knowledge on internal circuits of BJT and FET.	Analyze
CO 5	Knowledge of determination of stability of transistors and thermal stabilization	Analyze
CO 6	Develop analytical capability in analysing signal generation, signal amplification, signal conditioning and signal processing applications of BJT and FET small signals.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	2	2	2	-	2	3	3
CO 2	3	3	3	2	2	-	-	2	2	2	-	2	3	3
CO 3	3	3	2	2	2	-	-	2	2	2	-	2	3	3
CO 4	3	3	1	2	2	1	-	-	-	-	-	1	3	3
CO 5	3	3	1	2	2	-	-	2	2	2	-	2	3	3
CO 6	3	3	3	2	2		-	2	2	2	-	1	3	3
course	**3**	**2.8**	**2.1**	**1.8**	**1.8**	**0.1**	**-**	**1.6**	**1.6**	**1.6**	**-**	**1.6**	**3**	**3**

Faculty Signature

Course Title:	NETWORK ANALYSIS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-I
Regulation:	R19
Subject Code:	ES1209
Name of the Faculty:	Mr. M. Hari Krishna

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Obtain the awareness of basic circuit elements	Apply
CO 2	Detailed study of R, L and C circuit combinations	Understand
CO 3	Know the periodic and Non periodic waveforms performance in various circuits	Understand
CO 4	Obtain the knowledge in characteristics of 2-port network parameters like Z,Y, h, g and ABCD	Analyze
CO 5	Understand the concepts of filter design in real world applications	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	-	-	-	-	2	3	3
CO 2	3	2	2	1	1	-	-	-	-	-	-	2	2	3
CO 3	3	3	-	2	2	-	-	-	-	-	-	2	2	2
CO 4	3	3	2	2	2	-	-	-	-	-	-	2	2	3
CO 5	3	2	1	2	2	-	-	-	-	-	-	2	2	3
course	**3**	**2.4**	**1.6**	**1.6**	**1.6**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**2.2**	**2.8**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Managerial Economics and Financial Analysis
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II/I
Regulation:	R16
Subject Code:	R1621026
Name of the Faculty:	Mr.Dr.N.Suresh Babu

I.**COURSE OUTCOMES(COs):**

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To introduce micro as well as macro, economic concepts that are useful in business decision making	Apply
CO 2	To introduce the concepts of cost and significance, limitation of Break even analysis.	Apply
CO 3	To master the basic tools of microeconomics: supply and demand analysis; firms' production and pricing decisions, market equilibrium and market structure analysis.	Apply
CO 4	The objective of this course is to acquaint the students regarding various accounting concepts and its application in managerial decision making	Apply
CO 5	To enable the students to analyze a company's financial statements and come to a reasoned conclusion about the financial situation of the company.	Analyze
CO 6	To provide the optimal decisions acquiring the knowledge on financial accounting and its analysis	Understand

II. CO-PO/PSO MATRIX:

PO's/Co's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	2	3	-	3	-	-	-	-	-	-	-	2	2
CO2	3	-	2	-		-	-	-	-	-	-	2	3	2
CO3	2	-	3	-		-	-	-	-	-	-	2	2	2
CO4	3	3	-	-	3	-	-	-	-	-	-	2	3	2
CO5	3	3	-	-	3	-	-	-	-	-	-	2	3	2
CO6	3	2	-	-		-	-	-	-	-	-	2	2	2
Course	**2.3**	**2.5**	**2.6**	**-**	**3**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**2.5**	**2**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**RANDOM VARIABLE AND STOCHASTIC PROCESS**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-I
Regulation:	R19
Subject Code:	**R1621044**
Name of the Faculty:	Mrs P. DHANALAKSHMI

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Mathematically model the random variables and solve simple probabilistic problems	Apply
CO 2	Identify different types of random variables and compute statistical average of these random variables	Apply
CO 3	Characterize the random process in the time and frequency domains	Understand
CO 4	Analyze the LTI systems with random inputs	Understand
CO 5	Apply the principles of a random process in system concepts	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	3	3	1	1	3	-	-	-	-	1	1	3	3
CO 2	1	2	2	1	-	3	-	-	-	-	-	2	3	3
CO 3	1	2	2	1	-	3	-	-	-	-	-	3	3	3
CO 4	2	3	3	3	-	3	-	-	-	-	3	2	3	3
CO 5	2	3	3	3	-	3	-	-	-	-	3	2	3	3
course	**1.8**	**2.6**	**2.6**	**1.8**	**0.2**	**3**	-	-	-	-	**1.4**	**1.8**	**3**	**3**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Signals & Systems**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-I
Regulation:	R19
Subject Code:	**R1621043**
Name of the Faculty:	Mr.T RAMESH

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Characterize the signals and systems and principles of vector spaces, Concept of orthgonality.	Apply
CO 2	Analyze the continuous-time signals and continuous-time systems using Fourier series, Fourier transform and Laplace transform	Apply
CO 3	Apply sampling theorem to convert continuous-time signals to discrete-time signal and reconstruct back and Understand the relationships among the various representations of LTI systems	Understand
CO 4	Understand the Concepts of convolution, correlation, Energy and Power density spectrum and their relationships	Analyze
CO 5	Apply z-transform to analyze discrete-time signals and systems	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	-	-	-	-	2	3	3
CO 2	3	3	3	2	2	-	-	-	-	-	-	2	3	3
CO 3	3	3	2	2	2	-	-	-	-	-	-	2	2	2
CO 4	3	3	1	2	2	1	-	-	-	-	-	1	3	3
CO 5	3	3	1	2	2	-	-	-	-	-	-	2	3	3
course	**3**	**2.8**	**2**	**1.8**	**1.8**	**0.2**	**-**	**-**	**-**	**-**	**-**	**1.8**	**2.8**	**2.8**

Faculty Signature

Department of Electronics and Communication Engineering

Course outcome mapping with PO's and PSO's

Course Title:	Switching Theory and Logic Design
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-I
Regulation:	R19
Subject Code:	**R1621042**
Name of the Faculty:	Mrs M ANUSHA

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Able to manipulate numeric information in different forms, e.g. different bases, signed integers, various codes such as ASCII, gray, and BCD.	Apply
CO 2	Able to manipulate the different logics using NAND and NOR gates	Apply
CO 3	Able to manipulate simple Boolean expressions using the theorems and postulates of Boolean algebra and to minimize combinational functions.	Understand
CO 4	Able to design and analyze small combinational circuits and to use standard combinational functions/building blocks to build larger more complex circuits.	Analyze
CO 5	Able to design and analyze small sequential circuits and devices and to use standard sequential functions/building blocks to build larger more complex circuits	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	1	1	1	1	1	-	-	-	-	-	-	-	2	2
CO 2	1	1	1	1	-	-	-	-	-	-	-	2	3	2
CO 3	3	3	3	3	-	3	-	-	-	-	3	3	2	3
CO 4	3	3	3	3	-	3	3	-	-	-	3	3	3	3
CO 5	3	3	3	3	-	3	3	-	-	-	3	3	3	3
course	**2.2**	**2.2**	**2.2**	**2.2**	**-**	**1.8**	**1.2**	**-**	**-**	**-**	**1.8**	**2.2**	**2.6**	**2.6**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	ELECTRONIC DEVICES &CIRCUITS LAB
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-I
Regulation:	R19
Subject Code:	**R1621047**
Name of the Faculty:	K VENKANNA

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the fundamentals of construction of the semiconducting material, fabrication of elements, working principles and operation of semiconductors.	Apply
CO 2	Analyze the concept with the working principles of forward and reverse bias characteristics.	Understand
CO 3	Demonstrate the basic skills in design and analysis of filter circuits, biasing circuits.	Understand
CO 4	Discriminate the principle, construction and operation of BJTs, FETs and MOSFETs.	Understand
CO 5	Interpret the different techniques for FET and MOSFET circuit designs, performance and analysis-volt amp characteristics of BJT and FET amplifiers	Analyze
CO 6	Analyze the small signal low frequency Transistor amplifiers using h-parameters	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	1	2	2	1	1	1	-	2	2	-	1	1	2	2
CO 2	1	2	2	2	2	-	-	1	1	1	-	1	3	3
CO 3	2	2	2	2	-	-	2	-	2	2	1	1	2	2
CO 4	1	2	2	1	2	1	1	-	-	-	-	1	3	3
CO 5	3	2	2	2	2	-	1	2	2	2	1	1	3	3
CO 6	-	1	-	-	--	-	-	2	-	-	-	1	3	3
course	**1.3**	**1.8**	**1.6**	**1.3**	**1.1**	**0.3**	**1.8**	**1.16**	**1.1**	**0.8**	**0.5**	**1**	**2.6**	**2.6**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	N&ET LAB
Programme:	B.Tech
Academic Year	**2019-20**
Year/Semester:	II/I
Regulation:	R16
Subject Code:	R1621044
Name of the Faculty:	G VENKAT

I,COURSE OUTCOMES(COs):

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Obtain the knowledge on basic network elements.	ANALYSIS
CO 2	Analyze the RLC circuits behavior in detailed.	ANALYSIS
CO 3	Analyze the performance of periodic waveforms.	UNDERSTAND
CO 4	Understand the knowledge in characteristics of two port network parameters (Z, Y, ABCD, h & g).	APPLY
CO 5	Analyze the filter design concepts in real world applications	APPLY

Upon completion of the course, students will be able to:

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	1	-	2	-	-	-	-	-	-	1	2	2
CO2	3	3	-	-	2	-	-	-	-	-	-	-	2	2
CO3	2	3	1	-	2	-	-	-	-	-	-	1	2	2
CO4	3	2	1	-	2	-	-	-	-	-	-	1	2	3
CO5	3	2	1	-	2	-	-	-	-	-	-	1	2	2
Course	**3**	**2**	**1**	**-**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**2**	**2**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Antennas and Wave Propagation**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-I
Regulation:	R19
Subject Code:	**R1631045**
Name of the Faculty:	Mr. K Venkanna

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Basic antenna parameters identification	Apply
CO 2	Design & analyze wire antennas, loop antennas, reflector antennas, lence antennas ,horn antennas & micro strip antennas	Apply
CO 3	Quantify the fields radiated by various types of antennas	Understand
CO 4	analyze antenna measurements to assess antennas performance	Analyze
CO 5	Identify the characteristics of radio wave propagation	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	-	-	-	-	-	-	-	-	3	2	2
CO 2	3	3	3	3	-	1	-	1	-	-	-	1	3	2
CO 3	3	3	3	3	-	2	-	-	-	-	1	2	2	3
CO 4	3	3	3	3	-	2	-	1	-	-	1	2	3	3
CO 5	3	3	2	3	-	2	-	1	-	-	1	2	3	3
course	**3**	**2.8**	**2.8**	**2.4**	**-**	**1.4**	**-**	**0.6**	**-**	**-**	**0.6**	**2**	**2.6**	**2.6**

Faculty Signature

Course Title:	COMPUTER ARCHITECTURE &ORGANIZATION
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III/I
Regulation:	R16
Subject Code:	R1631041
Name of the Faculty:	P.SOMARAJU

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the architecture of modern computer.	Understand
CO 2	Analyze the Performance of a computer using performance equation	Create
CO 3	Understanding of different instruction types.	Analyze
CO 4	Calculate the effective address of an operand by addressing modes	Evalute
CO 5	Analyze how computer stores positive and negative numbers	Analyze
CO6	understand to computer performs positive and negative numbers	Understand

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	-	2	-	-	-	-	-	-	-	2	2
CO2	2	3	2	2	2	-	-	-	-	-	-	-	3	2
CO3	3	2	2	-	3	-	-	-	-	-	-	-	2	3
CO4	3	2	2	2	-	-	-	-	-	-	-	-	3	3
CO5	3	2	1	-	-	-	-	-	-	-	-	-	3	3
CO6	2	3	2	-	-	-	-	-	-	-	-	-	2	2
Course	2.6	2.3	1.8	2	2.3	-	-	-	-	-	-	-	**2.6**	**2.6**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**DIGITAL IC APPLICATIONS**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-I
Regulation:	R19
Subject Code:	**R1631043**
Name of the Faculty:	Mrs. M Anusha

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Obtain the awareness of basic Digital Ic Applications.	Apply
CO 2	Detailed study of static and dynamic of various logic families and their interfacing.	Apply
CO 3	Obtain the knowledge at various levels of abstractions using IEEE standard 1076 hardware description language (V HDL).	Understand
CO 4	Understanding the concepts of combinational and sequential logic circuit using VHDC.	Analyze
CO 5	Conctruct melay and moore types of FSMS.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	3	2	1	2	-	-	-	-	-	-	2	2	2
CO 2	3	2	3	1	1	-	-	-	-	-	-	2	3	2
CO 3	3	3	-	2	1	-	-	1	-	1	-	2	2	3
CO 4	3	3	2	2	2	-	-	1	-	1	-	2	3	3
CO 5	3	2	1	2	2	-	-	-	-	1	-	2	3	3
course	**3**	**2.6**	**1.6**	**1.6**	**1.6**	**-**	**-**	**1**	**-**	**1**	**-**	**2**	**2.6**	**2.6**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	LINEAR IC APPLICATIONS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-I
Regulation:	R19
Subject Code:	R1631042
Name of the Faculty:	Mr. M Vara Prasad

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Design circuits using operational amplifiers for various applications	Apply
CO 2	Diagnose and trouble-shoot linear electronic circuits.	Apply
CO 3	Analyze and design amplifiers and active filters using Op-amp.	Understand
CO 4	Understand thoroughly the operational amplifiers with linear integrated circuits.	Analyze
CO 5	Understand the gain-band width concept and frequency response of the amplifier configurations	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	2	2	1	-	-	-	-	2	1	-	3	2	2
CO 2	3	2	3	2	1	-	-	-	3	2	-	1	3	2
CO 3	2	2	3	3	1	-	-	-	1	1	-	2	2	3
CO 4	1	3	2	2	2	1	-	-	-	-	-	1	3	3
CO 5	1	2	1	-	-	-	-	-	-	-	-	1	3	3
course	**1.6**	**2.4**	**2.2**	**1.6**	**0.8**	**0.2**	**-**	**-**	**1.2**	**0.8**	**-**	**1.6**	**2.6**	**2.6**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	DIGITAL COMMUNICATION
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-I
Regulation:	R19
Subject Code:	:R1631044
Name of the Faculty:	Mrs. M Anusha

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Evaluate the performance of different Waveform coding methods for the generation and digital signals and its representation.	Apply
CO 2	Calculate the probability of error for various types of digital modulation schemes.	Apply
CO 3	Determine different source coding methods.	Understand
CO 4	Calculate and examine different error control coding schemes for the reliable transmission of digital information over the channel.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	3	2	1	-	-	-	-	2	1	-	3	2	2
CO 2	3	2	3	2	-	-	-	2	3	2	-	1	3	2
CO 3	2	2	3	3	2	-	-	-	1	1	-	2	2	3
CO 4	1	3	1	2	2	1	-	-	-	-	-	1	3	3
course	2	2.5	2.2	2	1	1	-	0.5	1.5	1	--	1.7	2.5	2.5

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Digital IC Applications Lab**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-I
Regulation:	R19
Subject Code:	**R1631048**
Name of the Faculty:	Mrs B Rajya Lakshmi

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Able to understand HDL Basics	Apply
CO 2	Combinational logic design using VHDL	Analyze
CO 3	Sequential logic design using VHDL	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	-	-	1	1	3	-	-	-	-	-	-	-	2	2
CO 2	-	3	3	3	3	2	-	-	2	-	-	2	3	2
CO 3	3	3	3	3	3	2	-	-	2	-	-	2	2	3
course	**1**	**2**	**2.3**	**2.3**	**3**	**1.3**	**-**	**-**	**1.3**	**-**	**-**	**1.3**	**2.3**	**2.3**

Faculty Signature

Course Title:	**LINEAR IC APPLICATIONS LAB**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-I
Regulation:	R19
Subject Code:	**R1631047**
Name of the Faculty:	Mr. M Vara Prasad

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Design circuits using operational amplifiers for various applications	Apply
CO 2	Diagnose and trouble-shoot linear electronic circuits.	Apply
CO 3	Analyze and design amplifiers and active filters using Op-amp.	Understand
CO 4	Understand thoroughly the operational amplifiers with linear integrated circuits.	Analyze
CO 5	Understand the gain-band width concept and frequency response of the amplifier configurations	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	2	2	1	-	-	-	-	2	1	-	3	2	2
CO 2	3	2	3	2	1	-	-	-	3	2	-	1	2	2
CO 3	2	2	3	3	1	-	-	-	1	1	-	2	3	2
CO 4	1	3	2	2	2	1	-	-	-	-	-	1	3	3
CO 5	1	2	1	-	-	-	-	-	-	-	-	1	3	3
course	**1.8**	**2.2**	**2.2**	**1.6**	**0.8**	**0.2**	**-**	**-**	**1.2**	**0.8**	**-**	**1.6**	**2.6**	**2.4**

Faculty Signature

Course Title:	**PULSE AND DIGITAL CIRCUITS LAB**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-I
Regulation:	R19
Subject Code:	**R1631046**
Name of the Faculty:	Mrs.D Umamaheswari

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Design various linear & non-linear circuits and analyze their response	Apply
CO 2	Design and generate various types of non-sinusoidal waveforms using multivibrators	Apply
CO 3	Design current and voltage sweep circuits based on given specifications.	Understand
CO 4	Design various digital logic circuits.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	2	2	1	-	-	-	-	2	1	-	3	2	2
CO 2	3	2	3	2	1	-	-	-	3	2	-	1	2	2
CO 3	2	2	3	3	1	-	-	-	1	1	-	2	3	2
CO 4	1	3	2	2	2	1	-	-	-	-	-	1	3	3
course	2	2.2	2.5	2	1	1	-	-	1.5	1	-	1.7	2.5	2.25

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	COMPUTER NETWORKS
Programme:	B. Tech
Academic Year	2019-20
Year/Semester:	IV/I
Regulation:	R16
Subject Code:	R1641043
Name of the Faculty:	K. GOPI

I.   COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand OSI and TCP/IP models	Understand
CO2	Analyze MAC layer protocols and LAN technologies	Analyze
CO3	Design applications using internet protocols	Apply
CO4	Understand routing and congestion control algorithms	Understand
CO5	Understand how internet works	Understand

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	3	2	1	-	-	-	-	-	-	2	2	3
CO2	3	3	2	3	2	-	-	-	-	-	-	3	3	1
CO3	2	3	2	2	3	-	-	-	-	-	-	3	1	3
CO4	3	2	2	3	2	-	-	-	-	-	-	2	2	2
CO5	2	2	1	2	1	-	-	-	-	-	-	2	3	3
Course	3	2.5	2	2.5	2	-	-	-	-	-	-	2.5	2	2.5

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Digital Image Processing**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-I
Regulation:	R19
Subject Code:	**R1641042**
Name of the Faculty:	Mr. M Hari Krishna

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Familiar about digital images and able to perform image processing operations	Apply
CO 2	Implement image enhancement and image segmentation techniques with graphical analysis	Apply
CO 3	Understand about image restoration and reconstruction processes applying degradation models	Understand
CO 4	Know the mathematical analysis about image compression methods	Analyze
CO 5	Awareness about wavelets and morphological image processing	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	1	1	1	-	-	2	2	2	-	2	2	3
CO 2	3	3	3	2	2	-	-	2	2	2	-	2	2	2
CO 3	3	3	2	2	2	-	-	2	2	2	-	2	3	3
CO 4	3	3	1	2	2	1	-	-	-	-	-	1	2	3
CO 5	3	3	1	2	2	-	-	2	2	2	-	2	3	3
course	**3**	**2.8**	**1.6**	**1.8**	**1.8**	**0.2**	**--**	**2**	**2**	**2**	**--**	**1.8**	**2.4**	**2.8**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Embedded Systems**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-I
Regulation:	R19
Subject Code:	**R164104D**
Name of the Faculty:	Mrs. D Uma maheswari

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the basic concepts of an embedded system & able to know an embedded system design approach to perform a specific function.	Apply
CO 2	the hardware components required to Design an Embedded hardware	Apply
CO 3	Different types of embedded firmware design approaches on embedded environment	Understand
CO 4	understand how to integrate hardware & software of an embedded system using real time operating system.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	-	-	-	2	2	2	3
CO 2	3	3	3	2	2	-	-	2	-	1	2	2	2	2
CO 3	3	3	2	2	2	-	-	1	-	2	2	2	3	3
CO 4	3	3	1	2	2	1	-	1	-	2	2	1	2	3
course	**3**	**2.7**	**2.2**	**1.7**	**1.7**	**1**	**-**	**1**	**0**	**1.2**	**2**	**1.7**	**2.2**	**2.7**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering

Course outcome mapping with PO's and PSO's

Course Title:	**OPTICAL COMMUNICATIONS**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-I
Regulation:	R19
Subject Code:	**R1641044**
Name of the Faculty:	Mrs. B Supraja

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Select proper components required in Optical communications systems.	Apply
CO 2	Design and form optical fiber experiments in the laboratory, and learn how to calculate electromagnetic modes in waveguides, the amount of light lost going through an optical system, dispersion of optical fibres.	Apply
CO 3	Use different types of photo detectors and optical test equipment to analyze optical fiber and light wave systems.	Understand
CO 4	Choose the optical cables for better communication with minimum losses Design Build and demonstrate optical fiber experiments in the laboratory.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	1	2	1	-	-	1	1	-	-	2	-	1	3	3
CO 2	3	-	2	1	-	1	-	-	-	-	-	1	3	2
CO 3	1	3	1	-	-	-	-	-	-	-	-	1	3	3
CO 4	-	3	1	1	1	-	-	-	-	2	-	1	2	3
course	**1.7**	**2.7**	**1.2**	**1**	**1**	**1**	**1**	**-**	**-**	**2**		**1**	**2.8**	**2.8**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Radar Systems
Programme:	B. Tech
Academic Year	2019-20
Year/Semester:	IV-I
Regulation:	R19
Subject Code:	R1641041
Name of the Faculty:	Mr. Ch Kutumba Rao

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	**Demonstrate** the basic principle of RADAR System, and RADAR Equation.	Apply
CO 2	**Analyze** and understand the different types of radars and their applications.	**Analyze**
CO 3	Understand the concept of travelling and to understand different travelling methods.	Understand
CO 4	Recognize the various components of radar receiver and its performance.	Analyze
CO 5	Draw and Analyze FM-CW and MTI radar working, and their principles.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	2	2	2	-	1	2	3
CO 2	2	2	3	2	2	-	-	1	1	1	-	2	2	2
CO 3	3	2	2	3	2	-	-	2	2	2	-	1	3	3
CO 4	2	3	1	2	2	1	-	-	-	-	-	1	2	3
CO 5	2	3	1	3	2	-	-	2	2	2	-	2	3	3
course	2.4	2.4	2	2.2	1.8	1	-	1.75	1.75	1.75		1.4	2.4	2.8

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Television engineering
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-I
Regulation:	R19
Subject Code:	R164104A
Name of the Faculty:	Mr. Ch Gopala Krishna

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the building blocks used in radio and television systems	Apply
CO 2	Analyze and determine the performance of transmitter and receiver circuits	Apply
CO 3	Understand the principles of Color Television operation	Understand
CO 4	Compare the performance of TV standards and cameras	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	--	--	--	1	--	--	--	--	--	--	1	3	3
CO 2	1	--	1	--	3	-	--	1	--	--	--	1	3	2
CO 3	1	--	--	--	2	1	--	1	-	--	--	1	3	3
CO 4	---	--	1	-	1	3	--	1	--	--	--	--	2	3
course	**1.3**	**-**	**1**	**-**	**1.8**	**2**	**-**	**1**	**-**	**-**	**-**	**1**	**2.8**	**2.8**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Microwave and Optical Communication lab**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-I
Regulation:	R19
Subject Code:	**R1641047**
Name of the Faculty:	Mr.Ch Kutumba Rao

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Able to identify and demonstrate the working of various microwave and optical components.	Apply
CO 2	Able to analyze Microwave Passive Devices by conducting experiments and measuring various parameters	Apply
CO 3	Able to analyze the characteristics of Optical Sources like LED, LASER Diode, by conducting experiments and measuring various parameters	Understand
CO 4	Able to analyze the characteristics of optical fiber by conducting experiments and measuring various parameters.	Analyze
CO 5	Able to analyze antenna performance by conducting experiments and measuring various parameters	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	3	2	1	1	1	-	2	2	2		1	2	3
CO 2	1	2	2	2	2	-	-	1	1	1		1	2	3
CO 3	2	1	2	2	2	-	2	2	2	2		1	2	3
CO 4	1	2	2	1	2	1	1	-	-	-	1	1	2	3
CO 5	2	1	2	2	2	-	1	2	2	2	1	1	3	3
course	**1.6**	**1.8**	**2**	**1.6**	**1.8**	**0.4**	**0.8**	**1.4**	**1.4**	**1.4**	**0.5**	**1**	**2.2**	**3**

Faculty Signature

SREE VAHINI INSTITUTE OF SCIENCE & TECHNOLOGY::TIRUVURU

Department of Electronics and Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Digital signal processing lab
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-I
Regulation:	R19
Subject Code:	R1641048
Name of the Faculty:	Mr.CH.Gopala krishna

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the handling of discrete/digital signals using MATLAB	Understand
CO 2	Understand the basic operations of Signal processing	Understand
CO 3	Analyse the spectral parameter of window functions	Analyze
CO 4	Design IIR, and FIR filters for band pass, band stop, low pass and high pass filters.	Analyze
CO 5	Design the signal processing algorithm using MATLAB & VLAB.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	3	2	1	1	1	-	2	2	2	-	1	2	3
CO 2	1	2	2	2	2	-	-	1	1	1	-	1	2	3
CO 3	2	1	2	2	2	-	2	2	2	2	-	1	2	3
CO 4	1	2	2	1	2	1	1	-	-	-	1	1	2	3
CO 5	2	1	2	2	2	-	1	2	2	2	1	1	3	3
course	**1.6**	**1.8**	**2**	**1.6**	**1.8**	**0.4**	**0.8**	**1.4**	**1.4**	**1.4**	**1**	**1**	**2.2**	**3**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	M-II
Programme:	B.Tech
Academic Year	2019-2020
Year/Semester:	I/II
Regulation:	R19
Subject Code:	BS1102
Name of the Faculty:	P.HEMALATHA

I.   COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Develop the use of matrix algebra techniques	Understand
CO 2	Solve system of linear algebraic equations	Apply
CO3	Evaluate approximating the route of polynomial and transcendental equations	Evaluate
CO4	Apply newtons forward and backward interpolation	Apply
CO 5	Apply different algorithms for approximating the solutions of ordinary differential equations	Apply

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	-	-	-	-	-	2	2	2	-	-	-	2	3
CO2	2	-	2	2	-	-	-	-	-	-	-	-	3	2
CO3	2	2		-	-	-	2	-	-	-	-	-	2	2
CO4	2	-	2	-	-	-	3	-	-	-	-	-	3	2
CO5	2	-	-	-	-	-		-	3	3	-	-	3	2
Course	2.2	2	2	2	-	-	2.3	2	2.5	3	-	-	2	3

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**MATHEMATICS - III (BS1203)**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	BS1203
Name of the Faculty:	M.POTHURAJU

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Under stand the physical meaning of different operators such as gradient, curl and divergence	Apply
CO 2	Evaluate the work done against a field, circulation and flux using vector calculus	Apply
CO 3	Apply the Laplace transform for solving differential equations	Apply
CO 4	Find or compute the Fourier series of periodic signals	Apply
CO 5	evaluate methods for partial differential equations that model physical processes	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	-	2	-	-	-	-	-	-	-	-	2	2
CO2	-	3	-	3	-	-	-	-	-	-	-	2	3	2
CO3	2	3	3		-	-	-	-	-	-	-	-	2	3
CO4	3	2	-	2	-	-	-	-	-	-	-	2	3	2
CO5	3	-	3	2	-	-	-	-	-	-	-	2	2	3
Course	2.7	2.5	3	2.2	-	-	-	-	-	-	-	2	2.4	2.4

Faculty Signature

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Network Analysis
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	ES1209
Name of the Faculty:	M.HariKrishna

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Obtain the awareness of basic circuit elements	Apply
CO 2	Detailed study of R, L and C circuit combinations	Apply
CO 3	Know the periodic and Non periodic waveforms performance in various circuits	Apply
CO 4	Obtain the knowledge in characteristics of 2-port network parameters like Z,Y, h, g and ABCD	Apply
CO 5	Understand the concepts of filter design in real world applications	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	3	1	1	-	-	-	-	-	-	2	2	2
CO2	3	2	2	1	1	-	-	-	-	-	-	2	3	2
CO3	3	3	-	2	2	-	-	-	-	-	-	2	2	3
CO4	3	3	2	2	2	-	-	-	-	-	-	2	3	2
CO5	3	2	1	2	2	-	-	-	-	-	-	2	2	3
Course	3	3	2	2	2	-	-	-	-	-	-	2	2.4	2.4

Faculty Signature

Course Title:	APPLIED PHYSICS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	BS1204
Name of the Faculty:	M.V.S.PRASAD

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Explain the need of coherent sources and the conditions for sustained interference, Analyze the differences between interference and diffraction with applications, Illustrate the resolving power of various optical instruments.	Understanding, Applying, Analyzing
CO 2	Explain the fundamental concepts of quantum mechanics, Analyze the physical significance of wave function, Apply Schrödinger's wave equation for energy values of a free particle	Understanding, Applying
CO 3	Explain the various electron theories, calculate the Fermi energy, analyze the physical significance of wave function, interpret the effects of temperature on Fermi Dirac distribution function, summarize various types of solids based on band theory.	Understanding, Applying
CO 4	Classify the energy bands of semiconductors; Outline the properties of n-type and p-type semiconductors, Identify the type of semiconductor using Hall effect.	Understanding
CO 5	Explain the concept of dielectric constant and polarization in dielectric materials, summarize various types of polarization of dielectrics, interpret Lorentz field and Claussius Mosotti relation in dielectrics, classify the magnetic materials based on susceptibility and their temperature dependence. Explain the applications of dielectric and magnetic materials, Apply the concept of magnetism to magnetic devices.	Understanding, Applying

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	-	2	-	-	-	-	-	-	-	2	-	2
CO2	3	2	-	2	-	-	-	-	-	-	-	2	-	2
CO3	3	2	2	2	-	-	-	-	-	-	-	2	2	2
CO4	3	2	-	-	-	-	-	-	-	-	-	2	-	-
CO5	3	2	2	-	-	-	-	-	-	-	-	2	2	-
Course	**3**	**2**	**2**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	**2**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Electronic workshop lab
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	ES1215
Name of the Faculty:	K.Ramya

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Identify electronic components and study their specifications	Apply
CO 2	Build a printed circuit board for given specifications	Apply
CO 3	Execute PCB design with new techniques	Apply

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	3	2	-	-	-	-	-	-	-	-	-	2	2
CO2	1	1	3	-	-	-	-	-	-	-	-	-	1	1
CO3	1	1	3	-	-	-	-	-	-	-	-	-	2	2
Course	1.3	1.7	2.7	-	-	-	-	-	-	-	-	-	1.7	1.7

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	ENGLISH
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	HS1203
Name of the Faculty:	V J MOSES/Y.PULLA REDDY

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Vowels , Consonants, Pronunciation Phonetic transcription	Apply
CO 2	Past tense marker, Word stress	Apply
CO 3	Rhythm and Intonation	Apply
CO 4	Contrastive stress	Apply
CO 5	Word stress, stress in compound words	Remember

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	-	-	-	-	-	3	3	2	-	-	-	2	2
CO2	2	-	-	-	-	-	3	3	2	-	-	-	3	2
CO3	3	-	-	-	-	-	3	3	2	-	-	-	2	3
CO4	2	-	-	-	-	-	3	3	2	-	-	-	3	2
CO5	3	-	-	-	-	-	3	3	2	-	-	-	2	3
Course	2.4	-	-	-	-	-	3	3	2	-	-	-	2.4	2.4

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**BASIC ELECTRICAL ENGINEERING**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	ES1211
Name of the Faculty:	Prof J Ganesh Prasad Reddy

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Able to explain the operation of DC generator and analyze the characteristics of DC generator.	Apply
CO 2	Able to explain the principle of operation of DC motor and analyze their characteristics. Acquire the skills to analyze the starting and speed control methods of DCmotors.	Analyze
CO 3	Ability to analyze the performance and speed – torque characteristics of a 3-phase induction motor and understand starting methods of 3-phase inductionmotor.	Analyze
CO 4	Able to explain the operation of SynchronousMachines	Apply
CO 5	Capability to understand the operation of various specialmachines	Understand

II.CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	-	2	-	-	-	-	-	-	-	-	2	2
CO2	-	3	-	3	-	-	-	-	-	-	-	2	3	2
CO3	2	3	3		-	-	-	-	-	-	-	-	2	3
CO4	3	2	-	2	-	-	-	-	-	-	-	2	3	2
CO5	3	-	3	2	-	-	-	-	-	-	-	2	2	3
Course	2.7	2.5	3	2.2	-	-	-	-	-	-	-	2	2.4	2.4

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	BASIC ELECTRICAL ENGINEERING LAB
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	ES1208
Name of the Faculty:	Ch.Pavan Kumar

I.COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Determine and predetermine the performance of DC machines andtransformers.	Apply
CO 2	Control the DC shunt machines.	Apply
CO 3	Compute the performance of 1-phasetransformer.	Apply
CO 4	Perform tests on 3-phase induction motor and alternator to determine theirperformance characteristics.	Apply

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	-	2	-	-	-	-	-	-	-	-	2	2
CO2	-	3	-	3	-	-	-	-	-	-	-	2	3	2
CO3	2	3	3		-	-	-	-	-	-	-	-	2	3
CO4	3	2	-	2	-	-	-	-	-	-	-	2	3	2
Course	2.7	2.5	3	2.2	-	-	-	-	-	-	-	2	2.4	2.4

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	APPLIED PHYSICS LAB
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	I/II
Regulation:	R19
Subject Code:	ES1205
Name of the Faculty:	V.L.HARIKA

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Develop analytical/experimental skills and impart prerequisite hands on experience for engineering laboratories	Apply
CO 2	Understand the need for precise measurement practices for data recording	Understand
CO 3	Understand the principle, concept, working and applications of relevant technologies andcomparison of results with theoretical calculations	Understand
CO 4	Analyze the techniques and skills associated with modern scientific tools such as lasers and fiber optics	Analyze
CO 5	Develop basic communication skills through working in groups in performing the laboratory experiments and by interpreting the results	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	-	-	-	3	-	-	1	2	-	-	1	1	1
CO2	3	-	-	-	3	-	-	1	2	-	-	1	1	1
CO3	3	-	-	-		-	-	1	2	-	-	1	1	1
CO4	3	-	-	-	3	-	-	1	2	-	-	1	1	1
CO5	3	-	-	-	3	-	-	1	2	-	-	1	1	1
Course	**3**	**-**	**-**	**-**	**3**	**-**	**-**	**1**	**2**	**-**	**-**	**1**	**1**	**1**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Analog Communications
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-II
Regulation:	R19
Subject Code:	R1622044
Name of the Faculty:	Mrs D UMA MAHESWARI

COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Various analog modulation &demodulation schemes & their characteristics	Apply
CO 2	Analyze noise characteristics of various analog modulation techniques	Apply
CO 3	various functional blocks of radio transmitter& receiver Analyzation	Understand
CO 4	Design simple analog systems for various modulation techniques	Analyze
CO 5	different pulse modulation and demodulation techniques and signal multiplexing for various applications	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	-	2	-	-	-	-	2	-	2	2	2
CO 2	3	3	3	2	2	-	-	-	-	3	-	2	3	2
CO 3	3	3	2	2	2	-	2	-	-	2	-	2	2	3
CO 4	3	3	1	2	2	1	-	-	-	2	-	1	3	3
CO 5	3	3	1	2	2	-	2	-	-	2	-	2	3	3
course	3	2.8	2	1.6	2	0.2	0.8	-	-	2.2	-	1.8	2.6	2.6

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	CONTROL SYSTEMS
Programme:	B. Tech
Academic Year	**2019-20**
Year/Semester:	II/II
Regulation:	R16
Subject Code:	R1622042
Name of the Faculty:	V. MURALII KRISHNA

I.   COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S. No.	Course Outcomes	Blooms Taxonomy level
CO 1	The students understand the basic components of control systems.	Application
CO 2	The students are capable to solve problems in time domain & frequency domain	Analysis
CO 3	The students understand the frequency response for the stability of the system.	Application
CO 4	The students understand the concept of Compensators	Analysis/ Analyzing
CO 5	The students understand the State space Analysis of different variables	Analysis

II.   CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	3	2	3	-	-	-	-	-	-	-	-	2	2
CO 2	3	2	3	3	2	-	-	-	-	-	-	-	3	2
CO 3	3	3	3	3	-	-	-	-	-	-	-	-	2	3
CO 4	2	3	1	2	-	-	2	-	-	-	-	-	3	3
CO 5	3	3	3	3	-	-	-	-	-	-	-	-	3	3
Course	3	2	2	2	1	-	1	-	-	-	-	-	**2.6**	**2.6**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Electronic Circuits and Analysis
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-II
Regulation:	R19
Subject Code:	R1621041
Name of the Faculty:	Mr. T RAMESH

I.COURSE OUTCOMES(Cos): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To understand Concept of multistage amplifier and the frequency response of MOSFET and BJT amplifiers.	Apply
CO 2	Feedback concepts and construct feedback amplifiers and oscillators. Also summarizes its performance parameters.	Understand
CO 3	Knowledge about the power amplifiers and its types and also analyze its characteristics.	Understand
CO 4	Able to design amplifier circuits using BJT s And FET's. and observe the amplitude and frequency responses of common amplifier circuits	Analyze
CO 5	Develop the skill to build, and troubleshoot Analog circuits	Analyze

III. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	2	3	1	1	-	-	2	2	2	-	2	3	3
CO 2	2	1	3	1	2	-	-	2	2	2	-	2	3	2
CO 3	2	1	2	2	1	-	-	2	2	2	-	2	2	3
CO 4	2	2	1	1	2	1	-	-	-	-	-	1	3	3
CO 5	2	1	1	2	1	-	-	2	2	2	-	2	3	3
course	2	1.4	2	1.4	1.4	0.2	-	1.6	1.6	1.6	-	1.8	2.2	2.8

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	EM WAVES AND TRANSMISSION LINES
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-II
Regulation:	R19
Subject Code:	R1622043
Name of the Faculty:	Mr. K Venkanna

I.COURSE OUTCOMES(Cos): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Apply vector calculus to understand the 14ehavior of static electric fields in standard configurations.	Apply
CO 2	Apply vector calculus to understand the 14ehavior of static magnetic fields in standard configurations.	Apply
CO 3	Describe and analyse electromagnetic wave propagation in free-space	Understand
CO 4	Understand and analyse transmission lines.	Analyze
CO 5	Describe the concepts of transmission line	Analyze

IV.   CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	-	-	1	-	-	-	-	-	-	-	2	2
CO 2	2	3	-	1	1	-	-	-	-	-	-	-	3	2
CO 3	3	2	-	1	1	-	-	-	-	-	-	2	2	3
CO 4	2	3	-	-	1	-	-	-	-	-	-	2	3	3
CO 5	3	2	-	-	1	-	-	-	-	-	-	2	3	3
course	2.6	2.4	-	0.4	1	-	-	-	-	-	-	1.2	2.6	2.6

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Management Science
Programme:	B.TECH
Academic Year	2019-2020
Year/Semester:	II-II
Regulation:	R16
Subject Code:	
Name of the Faculty:	Dr.N.Suresh Babu

I.COURSE OUTCOMES (Cos):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Explain the management science approach to identification, analysis, decision, and implementation of problem solving.	Apply
CO 2	Identify, categorize and discuss management problems that can be analyzed by linear programming. Explain the importance of forecasting in organizations.	Apply
CO 3	Construct models for a variety of PERT/CPM. Describe the EOQ model and its variations or expansions.	Analyze
CO 4	illustrate the decision tree method of analysis for decision making under risk and under certainty and expected value	Apply
CO 5	Demonstrate the transportation method to solve problems manually and with the northwest corner method .Solve case problems using computer software.	Understand

V. CO-PO/PSO MATRIX:

PO's/Co's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	2	3	-	3	-	-	-	-	-	-	-	2	2
CO2	3	-	2	-	-	-	-	-	-	-	-	2	3	2
CO3	2	-	3	-	-	-	-	-	-	-	-	2	2	2
CO4	3	3	-	-	3	-	-	-	-	-	-	2	3	2
CO5	3	3	-	-	3	-	-	-	-	-	-	2	3	2
CO6	3	2	-	-	-	-	-	-	-	-	-	2	2	2
Course	2.33	2.5	2.66	-	3	-	-	-	-	-	-	2	2.5	2

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**PULSE AND DIGITAL CIRCUITS**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-II
Regulation:	R19
Subject Code:	**R1622045**
Name of the Faculty:	Mrs. P Dhana Lakshmi

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Design linear and non linear wave shaping circuit	Apply
CO 2	Apply the fundamental concepts of wave shaping for various switching and signal generating circuits.	Apply
CO 3	Design different multivibrators and time base generators	Understand
CO 4	Utilize the non sinusoidal signals in many experimental research areas.	Analyze
CO 5	Design different logic gates using diodes and transistors.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	1	3	1	1	1	-	-	-	-	-	-	-	2	2
CO 2	1	1	1	1	-	-	-	-	-	-	-	2	3	2
CO 3	3	3	3	3	-	2	-	-	-	-	2	3	2	3
CO 4	1	2	2	3	3	3	3	-	-	-	2	3	3	3
CO 5	2	2	3	3	-	3	3	-	-	-	3	3	3	3
course	**1.6**	**2.2**	**2**	**2.2**	**0.8**	**1.6**	**1.2**	**-**	**-**	**-**	**1.4**	**2.2**	**2.6**	**2.6**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Analog Communications Lab
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-II
Regulation:	R19
Subject Code:	R1622047
Name of the Faculty:	Mrs D UMA MAHESWARI

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the basic Analog modulation & Spectrum analysis of DSBSC	Apply
CO 2	Understand the analog modulation ,mathematical description & Modulation & Demodulation	Apply
CO 3	Draw on their knowledge on sampling theorem ,pulse modulation & demodulation	Analyze
CO 4	Understand the frequency modulation and demodulation	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	1	-	-	-	-	-	-	3	-	-	-	2	2
CO 2	1	2	-	-	-	-	2	-	3	2	-	-	3	2
CO 3	1	2	-	-	-	-	-	-	2	3	-	-	2	3
CO 4	1	2	-	-	-	-	2	-	3	3	-	-	3	3
course	1.25	1.75	-	-	-	-	1	-	2.75	2	-	-	2.5	2.5

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Electronic Circuit Analysis Lab
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	II-II
Regulation:	R19
Subject Code:	R1622048
Name of the Faculty:	Mr. T RAMESH

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	able to understand MULTISIM simulation software tool	Apply
CO 2	Design and analysis of transistor and oscillator	Apply
CO 3	Design and analysis of feedback and power amplifiers	Analyze
CO 4	Design and analysis of tuned amplifiers	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	-	-	1	1	3	-	-	-	-	-	-	-	2	2
CO 2	-	3	3	3	3	2	-	-	2	-	-	2	2	3
CO 3	3	3	3	3	3	2	-	-	2	-	-	2	2	3
CO 4	3	3	3	3	3	2	-	-	2	-	-	2	3	3
course	1.5	2.25	2.5	2.5	3	1.5	-	-	1.5	-	-	1.5	1.6	2.75

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Digital Signal Processing**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-II
Regulation:	R19
Subject Code:	**R1632044**
Name of the Faculty:	Mr.Ch Gopala Krishna

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Apply the difference equations concept in the anayziation of Discrete time systems	Apply
CO 2	Use the FFT algorithm for solving the DFT of a given signal	Apply
CO 3	Design a Digital filter (FIR&IIR) from the given specifications,Realize the FIR and IIR structures from the designed digital fil	Understand
CO 4	Use the Multirate Processing concepts in various applications(eg: Design of phase shifters, Interfacing ofdigital systems…)	Analyze
CO 5	Apply the signal processing concepts on DSP Processor	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	-	-	-	-	2	2	3
CO 2	3	3	3	2	2	-	-	-	-	-	-	2	3	2
CO 3	3	3	2	2	2	-	-	-	-	-	-	2	3	3
CO 4	3	3	1	2	2	1	-	-	-	-	-	1	2	3
CO 5	3	3	1	2	2	-	-	-	-	-	-	2	3	3
course	3	2.8	2	1.8	1.8	0.2	-	-	-	-	-	1.8	2.6	2.8

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Microprocessors and microcontroller
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-II
Regulation:	R19
Subject Code:	R1632041
Name of the Faculty:	Mr.Ch Kutumba Rao

I.COURSE OUTCOMES (Cos): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the architecture of 8086 microprocessor and micro controller, and their operations and pin diagrams	Apply
CO 2	Demonstrate and write programming skills in ALP and 8086 and 8051	Apply
CO 3	Illustrate the working of different peripherals like 8055,8257,8237,8279,8259 which are intwerface with 8086 MP.	Understand
CO 4	Distinguish and analize the interfacing of microprocessor and microcontroller with peripherals	Analyze
CO 5	Analyze and apply basic concepts of fundamentals of 8051 microcontroller and advanced microprocessors 80286,80386,80486.	Analyze
CO 6	Analyze and apply basic concepts of fundamentals of PIC microcontroller	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	1	1	1	-	-	1	3	-		-	-	1	2	3
CO 2	2	-	1	-		1	-	-	1	-	3	3	3	2
CO 3	1	3	1	-	-	2	-	-	-	-	-	1	3	3
CO 4	-	-	-	-	-	-	-	-	-	-	-	-	2	3
CO 5	1	3	1	-	1	2	-	2	-	-	-	1	3	2
CO 6	2	-	1	-	1	-	-	3	-	2	-	-	3	3
course	1.4	2.33	1	-	2	1	0.5	2.5	1	2	3	1	2.6	2.6

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	MICRO WAVE ENGINEERING
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-II
Regulation:	R19
Subject Code:	R1632042
Name of the Faculty:	Mrs. B Rajya Lakshmi

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Design different modes in waveguide structures	Apply
CO 2	Calculate S-matrix for various waveguide components and splitting the microwave energy in a desired direction	Apply
CO 3	Distinguish between Microwave tubes and Solid State Devices, calculation of efficiency of devices.	Understand
CO 4	Measure various microwave parameters using a Microwave test bench	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	2	2	2	-	1	-	-	-	-	-	-	2	2	3
CO 2	3	3	-	1	1	-	-	-	-	-	-	-	3	2
CO 3	3	2	1	1	1	-	-	-	-	-	-	2	3	3
CO 4	2	3	-	1	1	-	-	-	-	-	-	2	2	3
course	**2.5**	**2.5**	**1.5**	**1**	**1**	**-**	**-**	**-**	**-**	**-**	**-**	**2**	**2.5**	**2.75**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	POWER ELECTRONICS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III/II
Regulation:	R16
Subject Code:	R163204C
Name of the Faculty:	K.NageswarRao

I.   COURSE OUTCOMES(COs):

Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	To study the characteristics of various power semiconductor devices and to design firing circuits for SCR.	Apply
CO 2	To understand the operation of single phase full–wave converters and analyse harmonics in the input current.	Analyze
CO 3	To study the operation of three phase full–wave converters.	Apply
CO 4	To understand the operation of different types of DC-DC converters.	Understand
CO 5	To understand the operation of inverters and application of PWM techniques for voltage control and harmonic mitigation.	Understand
CO 6	To analyze the operation of AC-AC regulators.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	-	-	-	-	-	-	-	-	2	3	2
CO2	3	3	3	-	-	-	-	-	-	-	-	2	3	2
CO3	3	3	2	-	-	-	-	-	-	-	-	2	3	2
CO4	3	3	1	-	-	1	-	-	-	-	-	1	3	1
CO5	3	3	1	-	-	-	-	-	-	-	-	2	3	2
CO6	3	3	3	-	-	-	-	-	-	-	-	1	3	1
Course	3	3	2.16	-	-	1	-	-	-	-	-	1.66	3	1.66

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	VLSI DESIGN
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-II
Regulation:	R19
Subject Code:	R1632043
Name of the Faculty:	Mr. K Srinivasa Rao

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the properties of MOS active devices and simple circuits configured	Apply
CO 2	Study the characteristics of MOS Layers, Stick Diagrams CMOS/BiCMOS rules	Apply
CO 3	Study the characteristics of inverter Driving large capacitive loads Wiring Capacitances	Understand
CO 4	Knowledge of determination of stability three sets of design rules with which nMOS and CMOS designs may be fabricated	Analyze
CO 5	Develop analytical capability in analysing the scaling factors determining the characteristics and performance of MOS circuits in silicon	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	2	2	2	-	2	2	3
CO 2	2	3	3	2	2	-	-	2	2	2	-	2	2	2
CO 3	3	2	2	2	2	-	-	2	2	2	-	2	3	3
CO 4	2	3	1	2	2	1	-	-	-	-	-	1	2	3
CO 5	3	2	1	2	2	-	-	2	2	2	-	2	3	3
Course	2.6	2.4	2	1.8	1.8	0.2	-	1.6	1.6	1.6	-	1.8	2.4	2.8

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	**Microprocessors and microcontroller lab**
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-II
Regulation:	R19
Subject Code:	**R1632046**
Name of the Faculty:	Mr.Ch Kutumba Rao

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Develop ALP for sorting, multibyte addition, subtraction, factorial of given n numbers, and Arithmetic operations using 8086microprocessor	Apply
CO 2	Make use of different peripherals (8255,8279,8253) I/O interfacing with 8086 microprocessors	Apply
CO 3	Develop assembly language programs for various applications using 8051 microcontrollers	Understand
CO 4	Demonstrate knowledge and understanding the interfacing of switches, LED, Seven Segment Display, Stepper Motor, And Traffic Light Controller With 8051.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	1	1	1	-	-	1	2	2	-	-	2	3
CO 2	3	2	2	1	-	-	-	1	2	2	-	-	3	2
CO 3	3	2	2	1	-	-	-	1	2	2	-	1	3	3
CO 4	3	2	2	1	-	1	-	1	2	2	3	-	2	3
course	**3**	**2**	**1.75**	**1**	**1**	**1**	**-**	**1**	**2**	**2**	**3**	**1**	**2.5**	**2.75**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	VLSI DESIGN LAB
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	III-II
Regulation:	R19
Subject Code:	R1632047
Name of the Faculty:	Mr. K Srinivasa Rao

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the properties and design the schematic diagrams using CMOS logic	Apply
CO 2	Study the characteristics by using Mentor Graphics Software / Equivalent Industry Standard Software of MOS Layers, Stick Diagrams CMOS/BiCMOS rules	Apply
CO 3	Study the characteristics of inverter Driving large capacitive loads Wiring Capacitances	Understand
CO 4	Knowledge of three sets of design rules with which nMOS and CMOS designs may be fabricated	Analyze
CO 5	Analytical capability in analysing the scaling factors determining the characteristics and performance of MOS circuits in silicon	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	2	1	1	-	-	2	2	1	-	2	2	3
CO 2	2	3	3	2	2	-	-	2	2	2	-	2	2	2
CO 3	3	2	2	2	2	-	-	2	1	2	-	1	3	3
CO 4	2	2	1	2	1	1	-	-	-	-	-	1	2	3
CO 5	3	2	1	2	2	-	-	2	2	2	-	2	3	3
course	**2.6**	**2.2**	**1.8**	**1.8**	**1.6**	**0.2**	**-**	**1.6**	**1.4**	**1.4**	**-**	**1.2**	**2.4**	**2.8**

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Cellular And Mobile Communications
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-II
Regulation:	R19
Subject Code:	R1642041
Name of the Faculty:	Mr. Ch Gopala Krishna

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the basic cellular concepts like frequency reuse, cell splitting, cell sectoring etc., and variouscellular systems, identify limitations of conventional telephone systems	Apply
CO 2	Understand the different types of interference s influencing cellular and mobile communications	Apply
CO 3	Understand the frequency management, channel assignment and various propagation effects in cellularenvironment	Understand
CO 4	Understand the different types antennas used at cell site and mobile	Understand
CO 5	Understand the concepts of handoff and architectures of various cellular systems	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	3	1	1	-	-	-	-	-	-	2	3	3
CO 2	3	3	3	2	2	-	-	-	-	-	-	2	3	3
CO 3	3	3	2	2	2	-	-	-	-	-	-	2	3	3
CO 4	3	3	1	2	2	1	-	-	-	-	-	1	2	3
CO 5	3	3	1	2	2	-	-	-	-	-	-	2	3	3
course	3	2.8	2	1.8	1.8	0.2	--	-	--	--	--	1.8	2.8	3

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Electronic Measuring Instruments
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-II
Regulation:	R19
Subject Code:	R1642042
Name of the Faculty:	Mrs. M Anusha

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	An ability to working of measuring instruments operating principles of various display and recording devices various measurement techniques. Error in measurements and their rectification transmitting techniques. Application of digital techniques in development of Instrumentation system.	Apply
CO 2	Analyse and comparing of various measuring systems based on the response to the given inputs	Apply
CO 3	Design of basic electronic instruments according the required specifications.	Understand
CO 4	Solve engineering problems using different transducers for measurement of an electrical or nonelectrical quantity and establish the drawback of instruments.	Understand
CO 5	Create effective and suitable technique to overcome limitations of the instruments and display divices in measuring systems.	Analyze

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	2	1	1	1	-	-	2	2	2	-	2	3	3
CO 2	3	3	3	2	2	-	-	2	2	2	-	2	3	2
CO 3	3	3	2	2	2	-	-	2	2	2	-	2	2	2
CO 4	3	3	1	2	2	1	-	-	-	-	-	1	3	3
CO 5	3	3	1	2	2	-	-	2	2	2	-	2	3	3
course	3	2.8	1.6	1.8	1.8	0.2	-	1.6	1.6	1.6	--	1.8	2.8	2.6

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	SATELLITE COMMUNICATIONS
Programme:	B.Tech
Academic Year	2019-20
Year/Semester:	IV-II
Regulation:	R19
Subject Code:	R1642043
Name of the Faculty:	Mr. K Venkanna

I. COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Learn the evolution, growth of communication satellite & advantages and applications of GEO, MEO &LEO satellite communication.	Apply
CO 2	Analyse orbital motion of satellite and satellite link design	Apply
CO 3	Understand digital modulation techniques.	Understand
CO 4	Learn special purpose satellite & laser satellite communication	Analyze

II.   CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	1	1	-	-	1	1	-	-	-	-	1	3	3
CO 2	3	-	1	-	-	1	-	-	-	-	-	1	3	2
CO 3	1	3	1	-	-	2	-	-	-	-	-	1	3	3
CO 4	-	3	1	-	1	-	-	-	-	-	-	1	2	3
course	1.75	1.75	1	--	0.25	1	--	--	--	--	--	1	2.75	2.75

Faculty Signature

SREE VAHINI INSTITUTE OF SCINCE & TECHONOLOGY::TIRUVURU

Department of Electronicsand Communication Engineering
Course outcome mapping with PO's and PSO's

Course Title:	Wireless Sensor Networks
Programme:	B. Tech
Academic Year	2019-20
Year/Semester:	IV-II
Regulation:	R19
Subject Code:	**R164204A**
Name of the Faculty:	Mr. M Vara Prasad

I.COURSE OUTCOMES(COs): Upon completion of the course, students will be able to:

S.No.	Course Outcomes	Blooms Taxonomy level
CO1	Understand the basic concepts of wireless sensor networks, sensing, computing and communication tasks	Apply
CO 2	Knowledge of various standards and communication protocols adopted in wireless sensor networks	Apply
CO 3	Knowledge of the hardware, software and communication for wireless sensor network nodes	Understand
CO 4	Learn special purpose wireless and sensor networks communication for security	Understand

II. CO-PO/PSO MATRIX:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO 1	3	1	1	-	-	1	1	-	-	-	-	1	3	3
CO 2	3	-	1	-	-	1	-	-	-	-	-	1	3	2
CO 3	1	3	1	-	-	2	-	-	-	-	-	1	3	3
CO 4	-	3	1	-	1	-	-	-	-	-	-	1	2	3
course	**1.75**	**1.75**	**1**	**-**	**1**	**1**	**1**	**--**	**--**	**--**	**--**	**1**	**2.75**	**2.75**

Faculty Signature