JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF CIVIL ENGINEERING

I Year – I SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	BS1101	Mathematics – I	3	0	0	3
2	BS1102	Mathematics – II	3	0	0	3
3	BS1108	Engineering Physics	3	0	0	3
4	ES1104	Engineering Mechanics	3	1	0	4
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1109	Engineering Physics Lab	0	0	3	1.5
8	PR1101	Engineering Exploration Project	0	0	2	1
Total Credits			**16**	**0**	**12**	**19.5**

I Year – II SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	HS1201	English	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1210	Engineering Chemistry	3	0	0	3
4	ES1201	Programming for problem Solving Using C	3	0	0	3
5	ES1207	Computer Aided Engineering Drawing	1	0	3	2.5
6	ES1202	Programming for problem Solving Using C Lab	0	0	3	1.5
7	BS1211	Engineering Chemistry Lab	0	0	3	1.5
8	HS1203	Communications Skills Lab	0	0	3	1.5
9	ES1219	Workshop Practice Lab	0	0	3	1.5
10	MC1201	Environmental Science	3	0	0	0
Total Credits			**15**	**0**	**11**	**20.5**

TENTATIVE LESSON PLAN: R19HS1201

Course Title: English HS1201		
Section : CE	Date : 06--02-2020	Page No : 01 of 03
Revision No : 00	Prepared By: Mr. Yellamanda Vusa	Approved By : HOD

Tools: Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: A Drawer full of happiness, Deliverance by Premchand **CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers** **TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
1	**A Drawer full of happiness**	6-2-20	Lecture interspersed with discussions
2	**Listening : Short Audio Texts**	6-2-20	
3	**Speaking :** Asking and answering questions	6-2-20	
4	**Reading : Skimming and Scanning**	10-2-20	
5	**Reading for Writing :** Paragraph writing	10-2-20	
6	**Vocabulary :** Technical Vocabulary	10-2-20	
7	**Grammar :** Content words and function words	11-2-20	
8	The Deliverance : Munshi Prem Chand	11-2-20	
9	Long Answers	13-2-20	
10	Short Answers	13-2-20	
UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode **CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
12	**Nehru's letter to his daughter Indira on her birthday**	15-2-20	Lecture interspersed
13	**Listening:** Answering a series of questions	15-2-20	
14	**Speaking:** Discussion in pairs	17-2-20	
15	**Reading**: Identifying sequence of ideas	17-2-20	

16	**Reading for Writing**: Summarizing	18-2-20	with discussions
17	**Vocabulary**: Technical vocabulary	18-2-20	
18	**Grammar**: Use of articles	18-2-20	
19	**Bosom Friend Hira Bansode**	20-2-20	
20	Long Answers	20-2-20	
21	Short Answers	20-2-20	
UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf **CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
24	**Stephen Hawking-Positivity 'Benchmark**	24-2-20	Lecture interspersed with discussions
25	**Listening:** Listening for global comprehension	24-2-20	
26	**Speaking:** Discussing specific topics in pairs	24-2-20	
27	**Reading**: Reading a text in detail	25-2-20	
28	**Reading for Writing**: Summarizing	25-2-20	
29	**Vocabulary**: Technical vocabulary	27-2-20	
30	**Grammar**: Verbs - tenses; subject-verb agreement	27-2-20	
31	**Shakespeare's Sister by Virginia Woolf**	29-2-20	
32	Long Answers	29-2-20	
UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka **CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
33	**Like a Tree, Unbowed: Wangari Maathai-biography**	2-3-20	Lecture interspersed with
34	**Listening:** Making predictions while listening	2-3-20	
35	**Speaking:** Role plays for practice of conversational	2-3-20	

	English		discussions
36	**Reading**: Studying the use of graphic elements	3-3-20	
37	**Reading for Writing**: Information transfer	3-3-20	
38	**Vocabulary**: Technical vocabulary	5-3-20	
39	**Grammar**: Quantifying expressions	7-3-20	
40	Telephone Conversation: Wole Soyinka	7-3-20	
UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou **CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
41	**Stay Hungry-Stay foolish**	9-3-20	Lecture interspersed with discussions
42	**Listening** Identifying key terms	9-3-20	
43	**Speaking:** Formal oral presentations	10-3-20	
44	**Reading**: Reading for comprehension	12-3-20	
45	**Reading for Writing**: Writing academic proposals	16-320	
46	**Vocabulary**: Technical vocabulary	17-3-20	
47	**Grammar**: Editing short texts	17-3-20	

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Course Title: MATHEMATICS - III			
Section : CE	Date :		Page No : 01 of 04
Revision No : 00	Prepared By: G.KOTESWARAMMA		Approved By : HOD
Tools: Black board			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT – I: VECTOR CALCULUS **CO1: To interpretthephysical meaningofdifferentoperatorssuchasgradient,curlanddivergence, to estimatetheworkdoneagainstafield, circulationandfluxusingvectorcalculus** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	**Vector Differentiation:**Introduction	From: 6/2/2020 To 25/2/2020	Lecture interspersed with discussions
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	**Vector Integration**: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
UNIT – II: LAPLACE TRANSFORMS **CO2: To applytheLaplacetransformfor solvingdifferentialequations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
22	Laplace Transforms: Definitions, Existence	From 26/2/2020 To 11/3/2020	Lecture interspersed with discussions
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties Change of scale property		
25	Laplace Transforms of derivatives; Integrals		
26	$L(t^n f(t))$		
27	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	**Inverse Laplace Transforms:** Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
UNIT – III: FOURIER SERIES AND FOURIER TRANSFORMS **CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
34	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions		
39	Change of interval		
40	Half range sine and cosine series		
41	Fourier transforms		
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		
UNIT – IV: PDE OF FIRST ORDER **CO4:To identifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
48	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		
51	Solutions of PDE		
52	Method of grouping		
53	Method of multipliers		
54	Nonlinear PDE $f(p,q)=0$		
55	Nonlinear PDE $f(p,q,z)=0$		
56	Nonlinear PDE $f(p,x)=g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n)=0$		
60	$f(pz^m, qz^m)=0$		
UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS **CO5:**			

TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications			
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
62	$\sin(ax+by)$; $\cos(ax+by)$		
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

G. Koteswaramma
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Science and Humanities

Tentative Lesson Plan
ENGINEERING CHEMISTRY: (BS1210)

Course Title: B.Tech		
Section : CIVIL	Date:6/2/2020	Page No : 3
Revision No :	Prepared By: B.SOWJANYA	Approved By : HOD

Tools: Black board

No. of Periods-76	TOPIC	Date	Mode of Delivery

S.NO	TOPIC		
	UNIT –I-HIGH POLYMERS AND PLASTICS		
	CO1: To understand the various types of polymers and the formation mechanisms, plastics, rubber and their properties helps in selecting suitable materials for different applications.		
	Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.		
1.	Polymerisation:- Introduction	6/2/2020	
2.	Mechanism of polymerization	7/2/2020	
3.	Stereo regular polymers	8/2/2020	
4.	Methods of polymerization(emulsion and suspension)	11/2/2020	Lecture
5.	Physical and mechanical properties	11/2/2020	Interspersed
6.	Advantages and limitations of plastics	11/2/2020	With
7.	Thermoplastics and Thermosetting plastics	12/2/2020	Discussions
8.	Compounding of plastics	12/2/2020	
9.	Fabrication (4/5 techniques) of plastics	13/2/2020	
10.	Preparation, properties and applications of PE,PVC	13/2/2020	
11	Bakelite Teflon and polycarbonates	13/2/2020	
12	Elastomers :- Natural rubber- compounding	14/2/2020	
13	Vulcanization – Synthetic rubbers : Buna S, Buna N,	14/2/2020	
14	Thiokol ,polyurethanes -Applications of elastomers	15/2/2020	
15	Composite materials & Fiber reinforced plastics	15/2/2020	
16	Biodegradable polymers – Conducting polymers.	15/2/2020	
	UNIT-II-ELECTROCHEMICAL CELLS AND CORROSION		
	CO2: To gain the knowledge about the conductivities of solutions, how the cells charging and discharging and knowledge about the fuel cells working principles. Tounderstanding the problems associated with the corrosion and necessity of corrosion control methods.		
	Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.		
17	Galvanic cells - Reversible and irreversible cells	18/2/2020	
18	Single electrode potential – Electro chemical series and uses	25/2/2020	
19	Standard electrodes (Hydrogen and Calomel electrodes)	25/2/2020	
20	Concentration Cells -Batteries: Dry Cell - Ni-Cd cells	26/2/2020	
21	Ni-Metal hydride cells - Li cells - Zinc – air cells.	26/2/2020	Lecture

	Fuel Cells	27/2/2020	
22	**Corrosion** :- Definition – Theories of Corrosion	27/2/2020	Interspersed
23	Formation of galvanic cells by different metals	29/2/2020	With
24	concentration cells, differential aeration ,waterline corrosion	3/3/2020	Discussions
25	Passivity of metals – Pitting corrosion - Galvanic series	4/3/2020	
26	Factors which influence the rate of corrosion	4/3/2020	
27	Protection from corrosion – Design and material selection	4/3/2020	
28	Cathodic protection - Metallic (cathodic & anodic) coatings	5/3/2020	
29	(Galvanizing, Tinning, Electroplating, Electroless plating)	5/3/2020	

UNIT III: CHEMISTRY OF MATERIALS

CO3: To gain the Knowledge of advanced materials related to engineering applications is helpful in solving major engineering problems.

Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

30	Part- A: Nano materials:-	6/3/2020	Lecture
30	Introduction-sol-gel method-characterization by BET, SEM	7/3/2020	Interspersed
31	and TEM methodsapplications of graphene-carbon nanotubes	10/3/2020	With
32	and fullerenes:Types, preparation and applications Thermal	11/3/2020	Discussions
33	analysis techniques: Instrumentation and applications of	12/3/2020	
34	thermogravimetric analysis (TGA), differential thermal	13/3/2020	
35	analysis (DTA), differential scanning calorimetry (DSC).	17/3/2020	
36	Part-B: Refractories: - Definition, classification, properties),	4/4/2020	Lecture
37	refractoriness, refractoriness under load, porosity	7/4/2020	Interspersed
38	(and thermal spalling), failure of refractories. Lubricants: -	9/4/2020	With
39	Definition, mechanism of lubricants and properties (definition	9/4/2020	Discussions

UNIT IV-FUEL TECHNOLOGY

CO4: To gainknowledge of fuels, their occurrence, refining process and their formulation to improve the efficiency of machines or engines.

Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

40	Fuels – Introduction – Classification –	11/4/2020	
41	Calorific value - HCV and LCV – Dulong's formula	14/4/2020	
42	Bomb calorimeter – Numerical problems	14/4/2020	Lecture
43	Coal - Proximate and ultimate analysis – Significance	16/4/2020	Interspersed

44	Liquid fuels – Petroleum- Refining	16/4/2020	With
45	Cracking- Synthetic petrol	18/4/2020	Discussions
46	Petrol ,Diesel knocking - Octane and Cetane ratings	18/4/2020	
47	Anti-knock agents – Power alcohol – Bio-diesel	18/4/2020	
48	Gaseous fuels – Natural gas, LPG and CNG	21/4/2020	
49	Combustion – Calculation of air for the combustion of a fuel	21/4/2020	
50	Flue gas analysis , Orsat apparatus problems on combustion	23/4/2020	
51	**Explosives**:- Rocket fuels	23/4/2020	

UNIT- V-WATER TECHNOLOGY

CO5: To gain the knowledge about Hard water and Soft water. Which type of water should be used in industries and softening process of hard water.

Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

52	Hardness of water ,Determination of hardness by complexometric method	25/4/2020	
53	Boiler troubles (priming and foaming, scale formation, boiler corrosion	28/4/2020	Lecture
54	caustic embrittlement)-internal treatments-softening of hard water	30/4/2020	Interspersed
55	zeolite processs and related sums, ion exchange process	2/5/2020	With
56	Treatment of industrial waste water Portable water and its specifications-steps involved in purification of water-	7/5/2020 9,12/5/2020	Discussions
57	chlorination, break point chlorination-reverse osmosis and electro dialysis	14,16,19/5/2020	

"**Engineering Chemistry**" by, Dr. Bharathi kumara Yallamanchili, VGS.

B. Sowjanya 11/2/2021
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19ES1201

PROGRAMMING FOR PROBLEM SOLVING USING C

Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C		
Section : CIVIL	Date : 06/02/2020	Page No : 01 of 03
Revision No : 00	Prepared By : SK. REHANA	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I	**Introduction to C language**		
CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
1	Computer Systems	From: 6/2/2020 To 25/2/2020	Lecture Interspersed With discussions
2	Computing Environments		
3	Computer languages		
4	Creating and running Programs		
5	Computer Numbering System		
6	Storing Integers		
7	Storing Real Numbers		
8	C Programs, Identifiers		
9	Types, Variable		
10	Constants, Input/output		
11	Programming Examples		
12	Scope, Storage Classes and Type Qualifiers		
13	Expressions Precedence and Associativity		
14	Side Effects, Evaluating Expressions		
15	Type Conversion Statements		
16	Simple Programs		
17	Command Line Arguments		
18	Tutorial		
UNIT-II	**Operators, Selection and Repetition**		
CO2: To gain knowledge of the operators, selection, control statements and repetition in C.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
19	Exact Size Integer Types		Lecture interspersed with
20	Logical Bitwise Operators		
21	Shift Operators		
22	Logical Data and Operators		
23	Two Way Selection		
24	Multiway Selection		
25	More Standard Functions		

26	Concept of Loop	From 26/2/2020 To 11/3/2020	discussions
27	Pretest and Post-test Loops		
28	Initialization and Updating		
29	Event and Counter Controlled Loops		
30	Loops in C		
31	Other Statements Related to Looping		
32	Looping Applications		
33	Programming Example The Calculator Program		
35	Tutorial		
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III Arrays, String, Enum, Structure, Unions			
CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
36	Concepts, Using Array in C	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
37	Array Application		
38	Two Dimensional Arrays		
39	Multidimensional Arrays		
40	Programming Example – Calculate Averages		
41	String Concepts, C String		
42	String Input / Output Functions		
43	Arrays of Strings		
44	String Manipulation Functions		
45	String/ Data Conversion		
46	A Programming Example – Morse Code		
47	The Type Definition (Type def)		
48	Enumerated Types		
49	Structure		
50	Unions		
51	Programming Application		
52	Tutorial		
UNIT-IV Pointers			
CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
53	Introduction		Lecture interspersed
54	Pointers to pointers		
55	Compatibility, L value and R value		
56	Arrays, and Pointers		

57	Pointer Arithmetic and Arrays	From 13/4/2020 To 25/4/2020	with discussions
58	Memory Allocation Function		
59	Array of Pointers		
60	Programming Application		
61	Processor Commands		
62	Tutorial		
UNIT-V Files and Functions **CO5: To assimilate about File I/O and significance of functions.** **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**			
63	Function in C	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
64	User Defined Functions		
65	Inter-Function Communication		
66	Standard Functions		
67	Passing Array to Functions		
68	Passing Pointers to Functions		
69	Recursion		
70	Passing an Array to Function		
71	Files, Streams		
72	Standard Library Input / Output Functions		
73	Formatting Input / Output Functions		
74	Character Input / Output Functions		
75	Text versus Binary Streams		
76	Functions for Files		
77	Converting File Type		
78	Designing, Structured Programs		
79	Tutorial		

Signature of Faculty

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

Signature of HOD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE STRUCTURE-R19

I Year – I SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1101	Programming for Problem Solving Using C	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab	0	0	3	1.5
8	ES1102	Programming for Problem Solving Using C Lab	0	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
Total Credits			**16**	**0**	**12**	**19**

I Year – II SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	BS1202	Mathematics – II	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1212	Fundamentals of Computers	3	0	0	3
5	ES1217	Electrical Circuit Analysis - I	3	0	0	3
6	ES1218	Electrical Engineering Workshop	0	0	3	1.5
7	BS1205	Applied Physics Lab	0	0	3	1.5
8	HS1203	Communication Skills Lab	0	1	2	2
9	PR1201	Engineering Exploration Project	0	0	2	1
Total Credits			**15**	**1**	**10**	**21**

TENTATIVE LESSON PLAN: R19BS1202

Course Title: MATHEMATICS - II		
Section : EEE	Date : 26-08-2019	Page No : 01 of 02
Revision No : 00	Prepared By : K.BASAVARAJU	Approved By : HOD

Tools: Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: SOLVING SYSTEM OF LINEAR EQUATIONS, EIGEN VALUES AND EIGEN VECTORS **CO1: solve system of linear algebraic equations using Gauss elimination, Gauss Jordan, Gauss Seidel (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	Introduction to matrices	From 06-02-2020 To 22-02-2020	Lecture interspersed with discussions
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B		
8	Problems on rank method		
9	Gauss Elimination method		
10	Eigen values – definition		
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
UNIT – II:, CALEY-HAMILTON THEOREM, QUADRATIC FORMS **CO2: Develop the use of matrix algebra techniques that is needed by engineers for practical applications (L6)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley Hamilton theorem	From: 16-09-2019 To: 05-10-2019	Lecture interspersed with discussions
17	Diagonalization – problems		
18	Quadratic forms – definition, examples		
19	Matrix form of a quadratic form		
20	Canonical form of a quadratic form		
21	Methods of reducing a QF in to canonical form		
22	Orthogonal reduction method		
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		
UNIT-III : UNIT – III: ITERATIVE METHODS: **CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
26	Introduction	From: 07-10-2019 To: 19-10-2019 & From: 28-10-2019 To: 09-11-2019	Lecture interspersed with discussions
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method		
31	Problems		
33	Method – 3: Iteration method		
34	Problems		
35	Method – 4: Newton Raphson method		
36	Problems		
37	Newton Raphson method simultaneous equations		
38	Gauss Jacobi Method		
39	Gauss Seidal Method		
40	problems		
UNIT – IV: INTERPOLATION **CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
41	Introduction: Forward and Backward Differences		

42	Newton's Forward interpolation formula	From: 11-11-2019 To: 30-11-2019	Lecture interspersed with discussions
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems		
46	Gauss Forward interpolation formula – Problems		
47	Problems		
48	Gauss Backward interpolation formula – Problems		
49	Problems		
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		
UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION **CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
53	Trapezoidal rule	From 04-05-2020 To 23-05-2020	Lecture interspersed with discussions
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method		
58	Problems		
59	Picard's method of successive approximation		
60	Euler's method		
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

K. Basava Reju
Signature of Faculty 22/12/20

Signature of HOD 22/12/2020

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Course Title: MATHEMATICS - III			
Section : EEE	Date :	Page No : 01 of 04	
Revision No : 00	Prepared By: S.KALPANA	Approved By : HOD	
Tools: Black board			
No. of Periods	TOPIC	Date	Mode of Delivery
UNIT – I: VECTOR CALCULUS **CO1: To interpretthephysical meaningofdifferentoperatorssuchasgradient,curlanddivergence, to estimatetheworkdoneagainstafield, circulationandfluxusingvectorcalculus** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	**Vector Differentiation:**Introduction	From: 6/2/2020 To 25/2/2020	Lecture interspersed with discussions
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	**Vector Integration**: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
UNIT – II: LAPLACE TRANSFORMS **CO2: To applytheLaplacetransformfor solvingdifferentialequations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
22	Laplace Transforms: Definitions, Existence	From 26/2/2020 To 11/3/2020	Lecture interspersed with discussions
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties Change of scale property		
25	Laplace Transforms of derivatives; Integrals		
26	$L(t^n f(t))$		
27	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	**Inverse Laplace Transforms:** Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
UNIT – III: FOURIER SERIES AND FOURIER TRANSFORMS **CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
34	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions		
39	Change of interval		
40	Half range sine and cosine series		
41	Fourier transforms		
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		
UNIT – IV: PDE OF FIRST ORDER **CO4:To identifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
48	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		
51	Solutions of PDE		
52	Method of grouping		
53	Method of multipliers		
54	Nonlinear PDE $f(p,q)=0$		
55	Nonlinear PDE $f(p,q,z)=0$		
56	Nonlinear PDE $f(p,x)=g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n)=0$		
60	$f(pz^m, qz^m)=0$		
UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS **CO5:**			

TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications			
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
62	$\sin(ax+by)$; $\cos(ax+by)$		
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

S. Kalpana
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: BS1204/R19

Course Title: Applied Physics		
Section : EEE	Date : 04.02.2020	Page No : 00
Revision No :00	Prepared By : M.Vidya Elizabeth	Approved By : HOD
Tools:		

No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT -I	**UNIT- I WAVE OPTICS** **CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments.		Lecture interspersed with discussions
1	Introduction, Principle of Super Position	06/02/20 To 06/03/20	
2	Interference of light, Conditions for Sustained Interference		
3	Interference in thin films		
4	Newton Rings		
5	Newton Rings, Problems		
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit		
8	Double slit, N-Slit		
9	Circular aperture, Intensity distribution curves		Lecture interspersed with discussions
10	Rayleigh Criterion		
11	Diffraction Grating		
12	Resolving Power of Telescope, Grating		
13	RP OF Microscope		
14	Problems		
UNIT II	**QUANYUM MECHANICS:** **CO2:** Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20 To 14/03/20	
16	Davison and German expt,		
17	G.P.Thomson expt,		
18	Hesenberg uncertainty principle		Lecture interspersed with discussions
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		
UNIT-III	**CLASICAL FREE ELECTRON THEORY AND BAND THEORY OF SOLIDS** **CO3:**Analyze the effect of temperature on Fermi-Dirac distribution function and summarize various types of solids based on band theory. electron theory in the study of electrical conductivity.		
23	Classical free electron theory, merits and demerits	15/03/20 To 13/04/20	
24	Quantum free electron theory		
25	Fermi Dirac distribution function and its temperature dependendence		
26	Fermi energy, Density of states		
27	Blochs theorem, Kronig penney model		
28	Kronig penney model		
29	Energy bands- Classification of materials		

30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		
UNIT-IV:	**SEMICONDUCTUR PHYSICS**		Lecture interspersed with discussions
	CO4: Classify the energy bands of semiconductors, out line the properties of N and P type semiconductors and identify the type of semiconductor using Hall effect .		
33	Introduction-Intrinsic semiconductor	15/04/20 To 04/05/20	
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers		
37	Dependence of Fermi energy on carrier concentration and		
38	temperature, Hall effect,		
39	Hall co-efficient, Applications of Hall effect		Lecture interspersed with discussions
40	Drift and diffusion currents		
41	Einstein's Equation		
42	Problems		
UNIT- V	**MAGNETISM & DIELECTRICS**		
	CO5: . Explain the applications of dielectric and magnetic materials and apply the concept of magnetism to magnetic devices.		
43	**MAGNETISM**: Introduction	06/05/20 To 13/05/20	
44	Magnetic dipole momentum, Magnetization-		Lecture interspersed with discussions
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment		
47	Bohr Magneton -Classification of magnetic materials (Dia, Para and Ferro)		
48	Soft and hard magnetic materials		
49	Applications of Ferromagnetic material		
50	Problems		
51	**DIELECTRICS:** Introduction,	14/05/20 To 25/05/20	
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic (Quantitative),		
55	Orientation polarizations		
56	Lorentz internal field		
57	Claussius Mossoti equation-		
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

M.V. Elizabeth
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19ES1212

Course Title: FUNDAMENTALS OF COMPUTER SCIENCE (ES1212)		
Section : Sec A	Date : 6-2-2020	Page No : 01 of 02
Revision No : 00	Prepared By : CH SIVA RAJESH	Approved By : HOD

Tools: Black board, PPTs

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I : A Simple Computer System **CO1: Explain the concepts of computers and classify based on type and generation.** **TB1: An Introduction to Computer studies –Noel Kalicharan-Cambridge**			
1	Central processing unit	6-2-20	Lecture Interspersed With discussions
2	the further need of secondary storage	7-2-20	
3	Types of memory	8-2-20	
4	Hardware, Software and people	10-2-20	
5	Input, Output and storage	11-2-20	
6	Data Preparation	12-2-20	
7	Factors affecting input	13-2-20	
8	Input devices	14-2-20	
9	Output devices	15-2-20	
10	Secondary devices	17-2-20	
11	Communication between the CPU and Input/ Output devices	18-2-20	
UNIT-II : Problem Solving and Programming **CO2: Demonstrate the techniques of writing algorithms pseudo codes & schematic flow of logic in software development process.** **TB1: An Introduction to Computer studies –Noel Kalicharan-Cambridge**			
12	Algorithm development	19-2-20	Lecture interspersed with discussions
13	Flowcharts	20-2-20	
14	Looping	24-2-20	
15	some programming features	25-2-20	
16	Pseudo code	26-2-20	
17	the one-zero game	27-2-20	
18	some structured programming concepts	28-2-20	
19	documents	2-3-20	
20	Machine Language and assembly language	3-3-20	
21	high -level and low level languages	4-3-20	
22	Assemblers, Compilers, and Interpreters	5-3-20	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III Computer Networks, Operating systems **CO3: Teach about the purpose of networks and types of networks and media to connect the computers Teach about Operating Systems and its concepts.**			

TB2: Fundamentals of Computers –Reema Thareja-Oxford higher education			
23	Introduction to computer Networks	6-3-20	Lecture interspersed with discussions
24	Network topologies	9-3-20	
25	Types of Networks	11-3-20	
26	Network Devices	12-3-20	
27	Open System Inter connection Model	13-3-20	
28	Evolution of operating systems	16-3-20	
29	Process Management	17-3-20	
30	Command Interpreter	19-3-20	
31	Popular operating systems	20-3-20	
UNIT-IV Database Systems, Computer Systems and Development **CO4: Illustrate about database architecture and its components** **TB1: An Introduction to Computer studies –Noel Kalicharan-Cambridge** **TB2: Fundamentals of Computers –Reema Thareja-Oxford higher education**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
32	File-Oriented Approach	30-3-20	Lecture interspersed with discussions
33	Database-oriented Approach	31-3-20	
34	Database views	1-4-20	
35	Three-schema architecture	3-4-20	
36	Database models	7-4-20	
37	Components of database management systems	8-4-20	
38	Retrieving Data through Queries	9-4-20	
39	Investigation	13-4-20	
40	Analysis	14-4-20	
41	Design	15-4-20	
42	system processing and general program design	16-4-20	
43	Presentation to management and users	20-4-20	
44	Implementation	21-4-20	
45	Documents	22-4-20	
UNIT-V Emerging Computer Technologies **CO5:** Illustrate about distributed computing, peer to peer, grid, cloud on demand and utility computing. **TB2: Fundamentals of Computers –Reema Thareja-Oxford higher education**			
46	Distributed Networking	23,27-4-20	Lecture interspersed with discussions
47	Peer-to-peer Computing	28,29-4-20	
48	Grid Computing	4,5-5-20	
49	Cloud Computing	6,7-5-20	
50	Wireless network	8,11-5-20	
51	Bluetooth	12,13-5-20	

2/2/21
Signature of Faculty

2/2/21
Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: ES1217

Course Title: Electrical Circuit Analysis - I		
Section :	Date: 6/2/2020	Page No: 1 of 3
Revision No:	Prepared by : T.Maha lakshmi	Approved by :HOD

Tools : Black board, PPTs

No.of periods	Topics	Date	Mode of Delivery
UNIT-I Introduction to Electrical Circuits **CO1 :Students are able to Various electrical networks in presence of active and passive elements.** **TB:: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw Hill Company,6 th edition**			
1,2	Basic Concepts of passive elements of R, L, C	7/2/2020 11/2/2020	Lecture interspersed with discussions
3,4	R,L,C V-I relations	12/2/2020 14/2/2020	
5,6	Sources (dependent and independent)	15/2/2020	
7	Kirchoff's laws	15/2/2020	
8	Network reduction techniques(series, parallel, series - parallel, star-to-delta and delta-to-star transformation),	18/2/2020	
9,10	source transformation technique	19/2/2020 22/2/2020	
11	nodal analysis to DC networks with independent voltage and current sources	22/2/2020	
12,13	mesh analysis to DC networks with independent voltage and current sources	22/2/2020	
14 .	nodal analysis to DC networks with dependent voltage and current sources	25/2/2020	
15	mesh analysis to DC networks with dependent voltage and current source	26/2/2020	
UNIT-II Magnetic Circuits **CO2 :Students are ableto Electrical networks with network topology concepts** **TB:: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw Hill Company,6 th edition**			
16,17	Basic definition of MMF	28/2/2020 29/2/2020	Lecture interspersed with discussions
18,19	flux and reluctance	29/2/2020	
20,21	analogy between electrical and magnetic circuits	3/3/2020 4/3/2020	
22,23	Faraday's laws of electromagnetic induction	6/3/2020 7/3/2020	
24,25	concept of self and mutual inductance	03-07-2020	
26	Dot convention	03-11-2020	
27	coefficient of coupling and composite magnetic circuit	13/3/2020	
28,29	analysis of series and parallel magnetic circuits	14/3/2020	

UNIT-III Single Phase A.C Systems
CO3 :Students are able to Any magnetic circuit with various dot conventions.
TB:: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw Hill Company,6 th edition

30	Periodic waveforms (determination of rms, average value and form factor)	14/3/2020	Lecture interspersed with discussions
31,32	concept of phase angle and phase difference	17/3/2020 18/3/2020	
33,34	waveforms and phasor diagrams for lagging, leading networks	20/3/2020 21/3/2020	
35,36	complex and polar forms of representations	21/3/2020 31/3/2020	
37,38	Steady state analysis of R, L and C circuits	1/4/2020 3/4/2020	
39,40	power factor and its significance	04-04-2020	
41,42	significance real, reactive and apparent power	4/4/2020 7/4/2020	
43,44	waveform of instantaneous power and complex power	8/4/2020 14/4/2020	

UNIT-IV Analysis of AC Networks
CO4 : Students are able to Any R, L, C network with sinusoidal excitation.
TB :: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw Hill Company,6 th edition

45,46,47	Extension of node and mesh analysis to AC networks	14/4/2020 15/4/2020 17/4/2020	Lecture interspersed with discussions
48,49,50	series and parallel resonance	18/4/2020	
51,52,53,54	selectively band width	21/4/2020 22/4/2020 24/4/2020 25/4/2020	
55,56,57,58	Quality factor	25/4/2020 28/4/2020 29/4/2020	
59,60,61,62	introduction to locus diagram	2/5/2020 5/5/2020	

UNIT-V Network theorems (DC & AC Excitations)
CO5 : Students are able to Electrical networks by using principles of network theorems.
TB :: Engineering Circuit Analysis by William Hayt and Jack E.Kemmerley,Mc Graw Hill Company,6 th edition

63,64	Superposition theorem	6/5/2020 8/5/2020	Lecture interspersed with discussions
65,66,67	Thevenin's theorem	05-09-2020	
68,69	Norton's theorem	12/5/2020 13/5/2020	
70,71,72	Maximum Power Transfer theorem.	15/5/2020 16/5/2020	
73,74	Reciprocity theorem	16/5/2020 19/5/2020	
75,76	Millman's theorem	20/5/2020 22/5/2020	
77,78,79	compensation theorem	23/5/2020	

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF MECHANICAL ENGINEERING

I Year – I SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	BS1101	Mathematics – I	3	0	0	3
2	BS1102	Mathematics – II	3	0	0	3
3	BS1108	Engineering Physics	3	0	0	3
4	ES1101	Programming for Problem Solving Using C	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1109	Engineering Physics Lab	0	0	3	1.5
8	ES1102	Programming for Problem Solving Using C Lab	0	0	3	1.5
9	MC1104	Constitution of India	2	0	0	0
Total Credits			**15**	**0**	**12**	**19**

I Year – II SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	HS1201	English	3	0	0	3
2	BS1210	Engineering Chemistry	3	0	0	3
3	ES1204	Engineering Mechanics	3	0	0	3
4	ES1206	Basic Electrical & Electronics Engineering	3	0	0	3
5	ES1207	Computer Aided Engineering Drawing	1	0	3	2.5
6	HS1203	Communication Skills Lab	0	0	2	1
7	BS1211	Engineering Chemistry Lab	0	0	2	1.5
8	ES1208	Basic Electrical & Electronics Engineering Lab	0	0	3	1.5
9	ES1219	Workshop Practice Lab	0	0	3	1.5
10	PR1201	Engineering Exploration Project	0	0	2	1
Total Credits			**13**	**0**	**15**	**21**

TENTATIVE LESSON PLAN: R19HS1201

Course Title: English HS1201		
Section : MECH	Date : 06--02-2020	Page No : 01 of 03
Revision No : 00	Prepared By: Mr. Yellamanda Vusa	Approved By : HOD

Tools: Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: A Drawer full of happiness, Deliverance by Premchand **CO1: Facilitate effective listening skills for better comprehension of academic lectures and English spoken by native speakers** **TB: —Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
1	**A Drawer full of happiness**	6-2-20	Lecture interspersed with discussions
2	**Listening : Short Audio Texts**	6-2-20	
3	**Speaking :** Asking and answering questions	6-2-20	
4	**Reading : Skimming and Scanning**	10-2-20	
5	**Reading for Writing :** Paragraph writing	10-2-20	
6	**Vocabulary :** Technical Vocabulary	10-2-20	
7	**Grammar :** Content words and function words	11-2-20	
8	The Deliverance : Munshi Prem Chand	11-2-20	
9	Long Answers	13-2-20	
10	Short Answers	13-2-20	
UNIT-II Nehru's letter to his daughter Indira on her birthday, Bosom Friend by Hira Bansode **CO2: Focus on appropriate reading strategies for comprehension of various academic texts and authentic materials** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
12	**Nehru's letter to his daughter Indira on her birthday**	15-2-20	Lecture interspersed
13	**Listening:** Answering a series of questions	15-2-20	
14	**Speaking:** Discussion in pairs	17-2-20	
15	**Reading**: Identifying sequence of ideas	17-2-20	

16	**Reading for Writing**: Summarizing	18-2-20	with discussions
17	**Vocabulary**: Technical vocabulary	18-2-20	
18	**Grammar**: Use of articles	18-2-20	
19	**Bosom Friend Hira Bansode**	20-2-20	
20	Long Answers	20-2-20	
21	Short Answers	20-2-20	
UNIT-III: Stephen Hawking-Positivity "Benchmark", Shakespeare's Sister by Virginia Woolf **CO3: Help improve speaking skills through participation in activities such as role plays, discussions and structured talks/oral presentations** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
24	**Stephen Hawking-Positivity 'Benchmark**	24-2-20	Lecture interspersed with discussions
25	**Listening:** Listening for global comprehension	24-2-20	
26	**Speaking:** Discussing specific topics in pairs	24-2-20	
27	**Reading**: Reading a text in detail	25-2-20	
28	**Reading for Writing**: Summarizing	25-2-20	
29	**Vocabulary**: Technical vocabulary	27-2-20	
30	**Grammar**: Verbs - tenses; subject-verb agreement	27-2-20	
31	**Shakespeare's Sister by Virginia Woolf**	29-2-20	
32	Long Answers	29-2-20	
UNIT IV Liking a Tree, Unbowed: Wangari Maathai, Telephone Conversation-Wole Soyinka **CO4: Impart effective strategies for good writing and demonstrate the same in summarizing, writing well organized essays, record and report useful information.** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
33	**Like a Tree, Unbowed: Wangari Maathai-biography**	2-3-20	
34	**Listening:** Making predictions while listening	2-3-20	Lecture interspersed with
35	**Speaking:** Role plays for practice of conversational	2-3-20	

	English		discussions
36	**Reading**: Studying the use of graphic elements	3-3-20	
37	**Reading for Writing**: Information transfer	3-3-20	
38	**Vocabulary**: Technical vocabulary	5-3-20	
39	**Grammar**: Quantifying expressions	7-3-20	
40	Telephone Conversation: Wole Soyinka	7-3-20	
UNIT-V: Stay Hungry-Stay foolish, Still I Rise by Maya Angelou **CO5: Provide knowledge of grammatical structures and vocabulary and encourage their appropriate use in speech and writing** **TB: Infotech English, Maruthi Publications, —The Individual Society‖, Pearson Publications**			
41	**Stay Hungry-Stay foolish**	9-3-20	Lecture interspersed with discussions
42	**Listening** Identifying key terms	9-3-20	
43	**Speaking:** Formal oral presentations	10-3-20	
44	**Reading**: Reading for comprehension	12-3-20	
45	**Reading for Writing**: Writing academic proposals	16-320	
46	**Vocabulary**: Technical vocabulary	17-3-20	
47	**Grammar**: Editing short texts	17-3-20	

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Science and Humanities

Tentative Lesson Plan: (BS1210)
ENGINEERING CHEMISTRY

Course Title: ENGINEERING CHEMISTRY		
Section : MECHANICAL	Date:6/2/2020	Page No : 3
Revision No :	Prepared By: B.SOWJANYA	Approved By : HOD

Tools: Black board

No. of Periods-76	TOPIC	Date	Mode of Delivery

S.NO	TOPIC		
	UNIT –I-HIGH POLYMERS AND PLASTICS		
	CO1: To understand the various types of polymers and the formation mechanisms, plastics, rubber and their properties helps in selecting suitable materials for different applications.		
	Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.		
1.	Polymerisation:- Introduction	6/2/2020	
2.	Mechanism of polymerization	7/2/2020	
3.	Stereo regular polymers	8/2/2020	
4.	Methods of polymerization(emulsion and suspension)	11/2/2020	Lecture
5.	Physical and mechanical properties	11/2/2020	Interspersed
6.	Advantages and limitations of plastics	11/2/2020	With
7.	Thermoplastics and Thermosetting plastics	12/2/2020	Discussions
8.	Compounding of plastics	12/2/2020	
9.	Fabrication (4/5 techniques) of plastics	13/2/2020	
10.	Preparation, properties and applications of PE,PVC	13/2/2020	
11	Bakelite Teflon and polycarbonates	13/2/2020	
12	Elastomers :- Natural rubber- compounding	14/2/2020	
13	Vulcanization – Synthetic rubbers : Buna S, Buna N,	14/2/2020	
14	Thiokol ,polyurethanes -Applications of elastomers	15/2/2020	
15	Composite materials & Fiber reinforced plastics	15/2/2020	
16	Biodegradable polymers – Conducting polymers.	15/2/2020	
	UNIT-II-ELECTROCHEMICAL CELLS AND CORROSION		
	CO2: To gain the knowledge about the conductivities of solutions, how the cells charging and discharging and knowledge about the fuel cells working principles. Tounderstanding the problems associated with the corrosion and necessity of corrosion control methods.		
	Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.		
17	Galvanic cells - Reversible and irreversible cells	18/2/2020	
18	Single electrode potential – Electro chemical series and uses	25/2/2020	
19	Standard electrodes (Hydrogen and Calomel electrodes)	25/2/2020	
20	Concentration Cells -Batteries: Dry Cell - Ni-Cd cells	26/2/2020	

21	Ni-Metal hydride cells - Li cells - Zinc – air cells. Fuel Cells	26/2/2020 27/2/2020	Lecture
22	**Corrosion** :- Definition – Theories of Corrosion	27/2/2020	Interspersed
23	Formation of galvanic cells by different metals	29/2/2020	With
24	concentration cells, differential aeration ,waterline corrosion	3/3/2020	Discussions
25	Passivity of metals – Pitting corrosion - Galvanic series	4/3/2020	
26	Factors which influence the rate of corrosion	4/3/2020	
27	Protection from corrosion – Design and material selection	4/3/2020	
28	Cathodic protection - Metallic (cathodic & anodic) coatings	5/3/2020	
29	(Galvanizing, Tinning, Electroplating, Electroless plating)	5/3/2020	

UNIT III: CHEMISTRY OF MATERIALS

CO3: To gain the Knowledge of advanced materials related to engineering applications is helpful in solving major engineering problems.

Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

30	Part- A: Nano materials:-	6/3/2020	Lecture
30	Introduction-sol-gel method-characterization by BET, SEM	7/3/2020	Interspersed
31	and TEM methodsapplications of graphene-carbon nanotubes	10/3/2020	With
32	and fullerenes:Types, preparation and applications Thermal	11/3/2020	Discussions
33	analysis techniques: Instrumentation and applications of	12/3/2020	
34	thermogravimetric analysis (TGA), differential thermal	13/3/2020	
35	analysis (DTA), differential scanning calorimetry (DSC).	17/3/2020	
36	Part-B: Refractories: - Definition, classification, properties),	4/4/2020	Lecture
37	refractoriness, refractoriness under load, porosity	7/4/2020	Interspersed
38	(and thermal spalling), failure of refractories. Lubricants: -	9/4/2020	With
39	Definition, mechanism of lubricants and properties (definition	9/4/2020	Discussions

UNIT IV-FUEL TECHNOLOGY

CO4: To gainknowledge of fuels, their occurrence, refining process and their formulation to improve the efficiency of machines or engines.

Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

40	Fuels – Introduction – Classification –	11/4/2020	
41	Calorific value - HCV and LCV – Dulong's formula	14/4/2020	
42	Bomb calorimeter – Numerical problems	14/4/2020	Lecture

43	Coal - Proximate and ultimate analysis – Significance	16/4/2020	Interspersed
44	Liquid fuels – Petroleum- Refining	16/4/2020	With
45	Cracking- Synthetic petrol	18/4/2020	Discussions
46	Petrol ,Diesel knocking - Octane and Cetane ratings	18/4/2020	
47	Anti-knock agents – Power alcohol – Bio-diesel	18/4/2020	
48	Gaseous fuels – Natural gas, LPG and CNG	21/4/2020	
49	Combustion – Calculation of air for the combustion of a fuel	21/4/2020	
50	Flue gas analysis , Orsat apparatus problems on combustion	23/4/2020	
51	**Explosives**:- Rocket fuels	23/4/2020	

UNIT- V-WATER TECHNOLOGY

CO5: To gain the knowledge about Hard water and Soft water. Which type of water should be used in industries and softening process of hard water.

Engineering Chemistry" by, Dr. Bharathi kumara Yallamanchili, VGS.

52	Hardness of water ,Determination of hardness by complexometric method	25/4/2020	
53	Boiler troubles (priming and foaming, scale formation, boiler corrosion	28/4/2020	Lecture
54	caustic embrittlement)-internal treatments-softening of hard water	30/4/2020	Interspersed
55	zeolite processs and related sums, ion exchange process	2/5/2020	With
56	Treatment of industrial waste water Portable water and its specifications-steps involved in purification of water-	7/5/2020 9,12/5/2020	Discussions
57	chlorination, break point chlorination-reverse osmosis and electro dialysis	14,16,19/5/2020	

"**Engineering Chemistry**" by, Dr. Bharathi kumara Yallamanchili, VGS.

B. Sowjanya 4/2/2021
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN

Course Title: ENGINEERING MECHANICS		Course code: R19BS1204	
Section : Sec I	Date : 10/02/2020	Page No : 01 to 03	
Revision No : 00	Prepared By: R. KIRAN KUMAR	Approved By : HOD	
Tools: BLACK BOARD			

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-IINTRODUCTION TO ENGG. MECHANICS, SYSTEMS OF FORCES			
CO1:Become familiar with a basic concepts of force and friction , direction and its application.			
TB: "ENGINEERING MECHANICS", S.S BHAVIKATTI, 1stEdition, New age publications, 2012.			
1	UNIT – 1 Introduction, Basic terminologies	10/02/2020	Lecture interspersed with discussions
2	Laws of mechanics	10/02/2020	
3	Systems of Forces	11/02/2020	
4	Resultant of Forces, Parallelogram law,	11/02/2020	
5	Parallelogram law problems		
6	Resolution method- concurrent forces, Problems	14/02/2020	
7	Problems	14/02/2020	
8	Moment of force, couple, Varignon's theorem	24/02/2020	
9	Resolution of force to a force and couple, Parallel forces and problems	17/02/2020	
10	Resultant of concurrent system in space	24/02/2020	
11	Resultant of concurrent system in space-problems	25/02/2020	
12	Friction introduction, coefficient of friction, coulomb's laws of dry friction, cone of friction, angle of friction, Problems	29/02/2020	
13	Problems, wedge friction problem	2/03/2020	
14	Ladder problem	3/03/2020	
UNIT-II EQUILIBRIUM OF SYSTEMS OF FORCES			
CO2: Gain knowledge about free body diagrams. Solution to problems using graphical methods and law of triangle of forces.			
TB:"ENGINEERING MECHANICS", S.S BHAVIKATTI, 1st Edition, New age publications, 2012.			
15	Equilibrium of system of forces	5/03/2020	Lecture interspersed with discussions
16	Equilibrium of system of forces problems	6/03/2020	
17	Problems	8/03/2020	
18	Problems- In space	6/03/2020	
19	Problems – Beams	7/03/2020	

44	problems	18/5/2020 20/5/2020	
45	Principle of work energy, Impulse-momentum	22/5/2020 27/5/2020	
46	problems	29/5/2020	
47	Revision	1/6/2020	
48	Revision	3/6/2020	
49	Kinetics - Analysis of body in translation, rotation	5/6/2020	
50	Rotation about fixed axis	8/5/2020	
51	Analysis in plane motion	11/5/2020	
52	problems	13/5/2020	
53	problems	18/5/2020 20/5/2020	
54	Principle of work energy, Impulse-momentum	22/5/2020 27/5/2020	
55	problems	29/5/2020	
56	Revision	1/6/2020	
57	Revision	3/6/2020	
58	Revision	5/6/2020	

Signature of Faculty
Date: 19/1/21

Signature of HOD
Date: 19/1/21

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: MECHANICAL-R19ES1206

Course Title: BASIC ELECTRICAL AND ELECTRONICS ENGINEERING (BEEE)		
	Date : 27-01-2020	Page No : 01 of 02
Revision No : 00	Prepared By :S.NAGESWARA RAO	Approved By : HOD

Tools : Black board

No. of Periods (Planned)	TOPIC	Date (Planned)	Mode of Delivery
UNIT –I ELECTRICAL CIRCUITS **CO1:: learn the basic principles of electrical law's and analysis of networks.** **TB :: Circuits and networks by A. Sudhakar , Shyammohan S Palli**			
1	Basic Definitions	28/1/20	Lecture interspersed with Discussions
2	Types of network elements	29/1/20	
3	Ohms law	30/1/20	
4	Kirchhoff's law	31/1/20	
5	Inductive networks	1/2/20	
6	Capacitive networks	4/2/20	
7	Series, parallel circuits	5/2/20	
8	Star-delta and delta-star transformations	6/2/20	
9	Numerical Problems	7/2/20	
UNIT –II DC MACHINES **CO2:: Understand the principle of operation and construction details of dc machines.** **TB :: Electrical Technology by M S Naidu, S Kamakshaiah** **TB:: Electrical Technology by U.A.Bakshi**			
10	Introduction	11/2/20	Lecture interspersed with discussions
11	Principle of operation of DC generator	12/2/20	
12	EMF equation	13/2/20	
13	Types of DC machine	14/2/20	
14	Torque equation	15/2/20	
15	Applications	18/2/20	
16	Three point starter	19/2/20	
17	Speed control methods of DC motor	20/2/20	
18	Swinburne's Test	25/2/20	
19	Numerical Problem	26/2/20	
20	Tutorial	27/2/20	
UNIT - III TRANSFORMER, ROTATING AC MACHINES **CO3:: Understand the principle of operation and construction details of transformers.** **TB :: Electrical Technology by M S Naidu, S Kamakshaiah** **TB:: Electrical Technology by U.A.Bakshi**			
21	Principle of operation and construction of single phase transformers	3/3/20	Lecture interspersed with discussions
22	EMF equation	4/3/20	
23	Losses	5/3/20	
24	OC & SC tests	6/3/20	
25	Efficiency and regulation	11/3/20	
26	Numerical Problem	12/3/20	
27	Tutorial	13/3/20	

28	Principle of operation and construction of alternators	31/3/20	Lecture interspersed with discussions
29	Types of alternators	1/4/20	
30	Principle of operation of synchronous motor	3/4/20	
31	Principle of operation of 3-Phase induction motor	7/4/20	
32	Slip-torque characteristics	8/4/20	
33	Efficiency	9/4/20	
34	Applications	15/4/20	
35	Numerical Problem	16/4/20	
36	Tutorial	17/4/20	
UNIT – IV RECTIFIERS & LINEAR ICs **CO5:: Study the operation of PN junction diode, half wave, full wave rectifiers and OP-AMPs.** **TB :: Electronic Devices and circuits by S Salivahanan** **TB :: linear integrated circuits by D.Roy choudhury**			
37	PN junction diodes	21/4/20	Lecture interspersed with discussions
38	Half wave, full wave rectifiers	22/4/20	
39	Characteristics of Op-Amps	23/4/20	
40	Applications of Op-Amp	28/4/20	
41	Tutorial	29/4/20	
UNIT – V TRANSISTORS **CO6:: learn the operation of PNP and NPN transistors and various amplifiers.** **TB :: Electronic Devices and circuits by S Salivahanan**			
42	PNP and NPN transistor	30/4/20	Lecture interspersed with discussions
43	Transistor as an amplifier	5/5/20	
44	Transistor amplifier	6/5/20	
45	Frequency response of CE amplifier	8/5/20	
46	Concepts of feedback amplifier	12/5/20	
47	Tutorial	13/5/20	

S. Nag

Signature of the Faculty

Signature of the HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

I Year – I SEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1101	Programming for Problem Solving Using C	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab	0	0	3	1.5
8	ES1102	Programming for Problem Solving Using C Lab	0	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
Total Credits			**16**	**0**	**12**	**19**

I Year – IISEMESTER

Sl. No	Course Code	Subjects	L	T	P	Credits
1	BS1202	Mathematics – II	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1209	Network Analysis	3	0	0	3
5	ES1211	Basic Electrical Engineering	3	0	0	3
6	ES1215	Electronic workshop	0	0	2	1
7	ES1208	Basic Electrical Engineering Lab	0	0	3	1.5
8	BS1205	Applied Physics Lab	0	0	3	1.5
9	HS1203	Communication Skills Lab	0	0	2	1
10	PR1201	Engineering Exploration Project	0	0	2	1
			15	**0**	**12**	**21**

TENTATIVE LESSON PLAN: R19BS1202

Course Title: MATHEMATICS - II		
Section : ECE – A	Date : 26-08-2019	Page No : 01 of 02
Revision No : 00	Prepared By : S.KALPANA	Approved By : HOD

Tools: Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: SOLVING SYSTEM OF LINEAR EQUATIONS, EIGEN VALUES AND EIGEN VECTORS **CO1: solve system of linear algebraic equations using Gauss elimination, Gauss Jordan, Gauss Seidel (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	Introduction to matrices	From 06-02-2020 To 22-02-2020	Lecture interspersed with discussions
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B		
8	Problems on rank method		
9	Gauss Elimination method		
10	Eigen values – definition		
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
UNIT – II:, CALEY-HAMILTON THEOREM, QUADRATIC FORMS **CO2: Develop the use of matrix algebra techniques that is needed by engineers for practical applications (L6)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley Hamilton theorem	From: 16-09-2019 To: 05-10-2019	Lecture interspersed with discussions
17	Diagonalization – problems		
18	Quadratic forms – definition, examples		
19	Matrix form of a quadratic form		
20	Canonical form of a quadratic form		
21	Methods of reducing a QF in to canonical form		
22	Orthogonal reduction method		
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		
UNIT-III : UNIT – III: ITERATIVE METHODS: **CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
26	Introduction	From: 07-10-2019 To: 19-10-2019 & From: 28-10-2019 To: 09-11-2019	Lecture interspersed with discussions
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method		
31	Problems		
33	Method – 3: Iteration method		
34	Problems		
35	Method – 4: Newton Raphson method		
36	Problems		
37	Newton Raphson method simultaneous equations		
38	Gauss Jacobi Method		
39	Gauss Seidal Method		
40	problems		
UNIT – IV: INTERPOLATION **CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
41	Introduction: Forward and Backward Differences		

42	Newton's Forward interpolation formula	From: 11-11-2019 To: 30-11-2019	Lecture interspersed with discussions
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems		
46	Gauss Forward interpolation formula – Problems		
47	Problems		
48	Gauss Backward interpolation formula – Problems		
49	Problems		
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		
UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION **CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
53	Trapezoidal rule	From 04-05-2020 To 23-05-2020	Lecture interspersed with discussions
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method		
58	Problems		
59	Picard's method of successive approximation		
60	Euler's method		
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

S. Kalpana
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1202

Course Title: MATHEMATICS - II		
Section : ECE – B	Date : 26-08-2019	Page No : 01 of 02
Revision No : 00	Prepared By : K.BASAVARAJU	Approved By : HOD

Tools: Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: SOLVING SYSTEM OF LINEAR EQUATIONS, EIGEN VALUES AND EIGEN VECTORS **CO1: solve system of linear algebraic equations using Gauss elimination, Gauss Jordan, Gauss Seidel (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	Introduction to matrices	From 06-02-2020 To 22-02-2020	Lecture interspersed with discussions
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B		
8	Problems on rank method		
9	Gauss Elimination method		
10	Eigen values – definition		
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
UNIT – II:, CALEY-HAMILTON THEOREM, QUADRATIC FORMS **CO2: Develop the use of matrix algebra techniques that is needed by engineers for practical applications (L6)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley Hamilton theorem	From: 16-09-2019 To: 05-10-2019	Lecture interspersed with discussions
17	Diagonalization – problems		
18	Quadratic forms – definition, examples		
19	Matrix form of a quadratic form		
20	Canonical form of a quadratic form		
21	Methods of reducing a QF in to canonical form		
22	Orthogonal reduction method		
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		
UNIT-III : UNIT – III: ITERATIVE METHODS: **CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
26	Introduction	From: 07-10-2019 To: 19-10-2019 & From: 28-10-2019 To: 09-11-2019	Lecture interspersed with discussions
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method		
31	Problems		
33	Method – 3: Iteration method		
34	Problems		
35	Method – 4: Newton Raphson method		
36	Problems		
37	Newton Raphson method simultaneous equations		
38	Gauss Jacobi Method		
39	Gauss Seidal Method		
40	problems		
UNIT – IV: INTERPOLATION **CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
41	Introduction: Forward and Backward Differences		

42	Newton's Forward interpolation formula	From: 11-11-2019 To: 30-11-2019	Lecture interspersed with discussions
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems		
46	Gauss Forward interpolation formula – Problems		
47	Problems		
48	Gauss Backward interpolation formula – Problems		
49	Problems		
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		
UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION **CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
53	Trapezoidal rule	From 04-05-2020 To 23-05-2020	Lecture interspersed with discussions
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method		
58	Problems		
59	Picard's method of successive approximation		
60	Euler's method		
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

K. Basava Rao

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Course Title: MATHEMATICS - III			
Section : ECE A	Date :		Page No : 01 of 04
Revision No : 00	Prepared By: B.V.RAMA KRISHNA RAO		Approved By : HOD
Tools: Black board			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT – I: VECTOR CALCULUS **CO1: To interpretthephysical meaningofdifferentoperatorssuchasgradient,curlanddivergence, to estimatetheworkdoneagainstafield, circulationandfluxusingvectorcalculus** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	**Vector Differentiation:**Introduction	From: 6/2/2020 To 25/2/2020	Lecture interspersed with discussions
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	**Vector Integration**: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
UNIT – II: LAPLACE TRANSFORMS **CO2: To applytheLaplacetransformfor solvingdifferentialequations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
22	Laplace Transforms: Definitions, Existence	From 26/2/2020 To 11/3/2020	Lecture interspersed with discussions
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties Change of scale property		
25	Laplace Transforms of derivatives; Integrals		
26	$L(t^n f(t))$		
27	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	**Inverse Laplace Transforms:** Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
UNIT – III: FOURIER SERIES AND FOURIER TRANSFORMS **CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
34	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions		
39	Change of interval		
40	Half range sine and cosine series		
41	Fourier transforms		
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		
UNIT – IV: PDE OF FIRST ORDER **CO4:To identifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
48	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		
51	Solutions of PDE		
52	Method of grouping		
53	Method of multipliers		
54	Nonlinear PDE $f(p,q)=0$		
55	Nonlinear PDE $f(p,q,z)=0$		
56	Nonlinear PDE $f(p,x)=g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n)=0$		
60	$f(pz^m, qz^m)=0$		
UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS **CO5:**			

TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications			
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
62	$\sin(ax+by)$; $\cos(ax+by)$		
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Course Title: MATHEMATICS - III			
Section : ECE B	Date :	Page No : 01 of 04	
Revision No : 00	Prepared By: S.KALPANA	Approved By : HOD	
Tools: Black board			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT – I: VECTOR CALCULUS **CO1: To interpretthephysical meaningofdifferentoperatorssuchasgradient,curlanddivergence, to estimatetheworkdoneagainstafield, circulationandfluxusingvectorcalculus** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	**Vector Differentiation:**Introduction	From: 6/2/2020 To 25/2/2020	Lecture interspersed with discussions
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	**Vector Integration**: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
UNIT – II: LAPLACE TRANSFORMS **CO2: To applytheLaplacetransformfor solvingdifferentialequations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
22	Laplace Transforms: Definitions, Existence	From 26/2/2020 To 11/3/2020	Lecture interspersed with discussions
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties Change of scale property		
25	Laplace Transforms of derivatives; Integrals		
26	$L(t^n f(t))$		
27	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	**Inverse Laplace Transforms:** Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
UNIT – III: FOURIER SERIES AND FOURIER TRANSFORMS **CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
34	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions		
39	Change of interval		
40	Half range sine and cosine series		
41	Fourier transforms		
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		
UNIT – IV: PDE OF FIRST ORDER **CO4:To identifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
48	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		
51	Solutions of PDE		
52	Method of grouping		
53	Method of multipliers		
54	Nonlinear PDE $f(p,q)=0$		
55	Nonlinear PDE $f(p,q,z)=0$		
56	Nonlinear PDE $f(p,x)=g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n)=0$		
60	$f(pz^m, qz^m)=0$		
UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS **CO5:**			

TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications			
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
62	$\sin(ax+by)$; $\cos(ax+by)$		
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

S. Kalpana
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19 BS1204

Course Title: Applied Physics		
Section : ECE A	Date : 04.02.2020	Page No : 00
Revision No :00	Prepared By : M.Vidya Elizabeth	Approved By : HOD
Tools:		

No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT -I	**UNIT- I WAVE OPTICS** **CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments.		Lecture interspersed with discussions
1	Introduction, Principle of Super Position	08/02/20 To 06/03/20	
2	Interference of light, Conditions for Sustained Interference		
3	Interference in thin films		
4	Newton Rings		
5	Newton Rings, Problems		
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit		
8	Double slit, N-Slit		
9	Circular aperture, Intensity distribution curves		Lecture interspersed with discussions
10	Rayleigh Criterion		
11	Diffraction Grating		
12	Resolving Power of Telescope, Grating		
13	RP OF Microscope		
14	Problems		
UNIT II	**QUANYUM MECHANICS:** **CO2:** Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20 To 14/03/20	
16	Davison and German expt,		
17	G.P.Thomson expt,		
18	Hesenberg uncertainty principle		Lecture interspersed with discussions
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		
UNIT-III	**CLASICAL FREE ELECTRON THEORY AND BAND THEORY OF SOLIDS** **CO3:**Analyze the effect of temperature on Fermi-Dirac distribution function and summarize various types of solids based on band theory. electron theory in the study of electrical conductivity.		
23	Classical free electron theory, merits and demerits	15/03/20 To 13/04/20	
24	Quantum free electron theory		
25	Fermi Dirac distribution function and its temperature dependendence		
26	Fermi energy, Density of states		
27	Blochs theorem, Kronig penney model		
28	Kronig penney model		

29	Energy bands- Classification of materials		
30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		
UNIT-IV:	**SEMICONDUCTUR PHYSICS** **CO4:** Classify the energy bands of semiconductors, out line the properties of N and P type semiconductors and identify the type of semiconductor using Hall effect .		Lecture interspersed with discussions
33	Introduction-Intrinsic semiconductor		
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers		
37	Dependence of Fermi energy on carrier concentration and	15/04/20 To 04/05/20	
38	temperature, Hall effect,		
39	Hall co-efficient, Applications of Hall effect		
40	Drift and diffusion currents		Lecture interspersed with discussions
41	Einstein's Equation		
42	Problems		
UNIT- V	**MAGNETISM & DIELECTRICS** **CO5:** Explain the applications of dielectric and magnetic materials and apply the concept of magnetism to magnetic devices.		
43	**MAGNETISM**: Introduction	06/05/20 To 13/05/20	
44	Magnetic dipole momentum, Magnetization-		
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment		
47	Bohr Magneton -Classification of magnetic materials (Dia, Para and Ferro)		Lecture interspersed with discussions
48	Soft and hard magnetic materials		
49	Applications of Ferromagnetic material		
50	Problems		
51	**DIELECTRICS:** Introduction,		
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic (Quantitative),		
55	Orientation polarizations	14/05/20 To 25/05/20	
56	Lorentz internal field		
57	Claussius_Mossoti equation-		
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

M.V. Elizabeth
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1204

Course Title: Applied Physics		
Section : ECE B	Date : 04.02.2020	Page No : 00
Revision No :00	Prepared By : M.Vidya Elizabeth	Approved By : HOD
Tools:		

No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT -I	**UNIT- I WAVE OPTICS** **CO1: Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments.**		Lecture interspersed with discussions
1	Introduction, Principle of Super Position	06/02/20 To 06/03/20	
2	Interference of light, Conditions for Sustained Interference		
3	Interference in thin films		
4	Newton Rings		
5	Newton Rings, Problems		
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit		
8	Double slit, N-Slit		
9	Circular aperture, Intensity distribution curves		Lecture interspersed with discussions
10	Rayleigh Criterion		
11	Diffraction Grating		
12	Resolving Power of Telescope, Grating		
13	RP OF Microscope		
14	Problems		
UNIT II	**QUANYUM MECHANICS:** **CO2:** Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20 To 14/03/20	
16	Davison and German expt,		
17	G.P.Thomson expt,		
18	Hesenberg uncertainty principle		
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		
UNIT-III	**CLASICAL FREE ELECTRON THEORY AND BAND THEORY OF SOLIDS** **CO3:**Analyze the effect of temperature on Fermi-Dirac distribution function and summarize various types of solids based on band theory. electron theory in the study of electrical conductivity.		Lecture interspersed with discussions
23	Classical free electron theory, merits and demerits	15/03/20 To 13/04/20	
24	Quantum free electron theory		
25	Fermi Dirac distribution function and its temperature dependendence		
26	Fermi energy, Density of states		
27	Blochs theorem, Kronig penney model		
28	Kronig penney model		
29	Energy bands- Classification of materials		

29	Energy bands- Classification of materials		
30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		
UNIT-IV:	**SEMICONDUCTUR PHYSICS** **CO4:** Classify the energy bands of semiconductors, out line the properties of N and P type semiconductors and identify the type of semiconductor using Hall effect .		Lecture interspersed with discussions
33	Introduction-Intrinsic semiconductor	15/04/20 To 04/05/20	
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers		
37	Dependence of Fermi energy on carrier concentration and		
38	temperature, Hall effect,		
39	Hall co-efficient, Applications of Hall effect		Lecture interspersed with discussions
40	Drift and diffusion currents		
41	Einstein's Equation		
42	Problems		
UNIT- V	**MAGNETISM & DIELECTRICS** **CO5:** Explain the applications of dielectric and magnetic materials and apply the concept of magnetism to magnetic devices.		
43	**MAGNETISM**: Introduction	06/05/20 To 13/05/20	
44	Magnetic dipole momentum, Magnetization-		
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment		
47	Bohr Magneton -Classification of magnetic materials (Dia, Para and Ferro)		
48	Soft and hard magnetic materials		
49	Applications of Ferromagnetic material		
50	Problems		
51	**DIELECTRICS:** Introduction,		Lecture interspersed with discussions
52	Dielectric polarization	14/05/20 To 25/05/20	
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic (Quantitative),		
55	Orientation polarizations		
56	Lorentz internal field		
57	Claussius Mossoti equation-		
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

M.V. Elizabeth
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19ES1209

Course Title: NETWORK ANALYSIS ( )		
Section: A	Date:06-02-2020	Page No: 1 of 3
Revision No:	Prepared by : P.RAVEENDRA	Approved by : HOD

Tools : Black board, PPTs

No.of periods	Topics	Date	Mode of Delivery
	UNIT-I:Introduction to Electrical Circuits **CO1 : Gain the knowledge on basic network elements.** **TB:: Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000** **TB:: Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning. TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH**		
1	Network elements classification	6/2/2020	Lecture interspersed with discussions
2	Electric charge, current, energy and potential	7/2/2020	
3	Electric charge, current, energy and potential	10/2/2020	
4	Resistance parameter - series and parallel combination	10//2020	
5	Inductance parameter -series and parallel combination	11/2/2020	
6	Capacitance parameter-series and parallel combination	11/2/2020	
7	Energy sources: Ideal, Non-ideal	12/2/2020	
8	Independent and dependent sources	12/2/2020	
9	Source transformation	13/2/2020	
10	Kirchoff's laws	13/2/2020	
11	Mesh analysis and Nodal analysis problem solving	13/2/2020	
12	Mesh analysis and Nodal analysis problem solving	10,11,12, 13/2/2020	
	A.C Fundamentals and Network Topology	14/2/2020	
13	Definitions of terms associated with periodic functions	14/2/2020	
14	Time period, Angular velocity and frequency	17/2/2020	
15	RMS value,Average value,Form factor and peak factor	17/2/2020	
16	RMS value,Average value,Form factor and peak factor	18/2/2020	
17	problem solving	18/2/2020	
18	problem solving	19/2/2020	
19	Phase angle, Phasor representation	24/2/2020	
20	Addition and subtraction of phasors	25/2/2020	
21	mathematical representation of sinusoidal quantities	25/2/2020	
22	explanation with relevant theory, problem solving	26/2/2020	
23	explanation with relevant theory, problem solving	26/2/2020	
24	Principal of Duality with examples	27/2/2020	
25	Definitions of branch, node, tree	27/2/2020	
26	planar, non-planar graph, incidence matrix	28/2/2020	
27	basic tie set schedule, basic cut set schedule	28/2/2020	

52	Milliman's, Reciprocity,Tellegens	21,22/4/2020	Lecture interspersed with discussions
53	Milliman's, Reciprocity,Tellegens	23,24/4/2020	
54	Compensation, Substitution	27/4/2020	
55	Superposition, Max Power Transfer	28,29/4/2020	
56	Superposition, Max Power Transfer	30/4/2020,4/5/2020	
57	problem solving using dependent sources also	4,5/5/2020	
58	problem solving using dependent sources also	6,7/5/2020	
59	problem solving using dependent sources also	8/5/2020	
60	problem solving using dependent sources also	8/5/2020	

UNIT-V:Two-port networks

CO5 : gain the knowledge in characteristics of two port network parameters (Z, Y, ABCD, h & g).

TB::Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000

TB:: Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning, TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH

61	Relationship of two port networks	11/5/2020	Lecture interspersed with discussions
62	Z-parameters, Y- parameters	12,13/5/2020	
63	Transmission line parameters, h-parameters	14,15/5/2020	
64	Inverse h- parameters	18/5/2020	
65	Inverse Transmission line parameters	18,19/5/2020	
66	Relationship between parameter sets	20/5/2020	
67	Parallel connection of two port networks	21,22/5/2020	
68	Cascading of two port networks	21,22/5/2020	
69	series connection of two port networks	21,22/5/2020	
70	problem solving including dependent sources also	21,22/5/2020	
71	problem solving including dependent sources also	21,22/5/2020	

P. Raveendra

Signature of the Faculty

Signature of the HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19ES1209

Course Title: NETWORK ANALYSIS (		
Section:B	Date:06-02-2020	Page No: 1 of 3
Revision No:	Prepared by : P.RAVEENDRA	Approved by :HOD

Tools : Black board, PPTs

No.of periods	Topics	Date	Mode of Delivery
UNIT-I:Introduction to Electrical Circuits **CO1 : Gain the knowledge on basic network elements.** **TB:: Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000** **TB:: Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning. TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH**			
1	Network elements classification	6/2/2020	Lecture interspersed with discussions
2	Electric charge, current, energy and potential	7/2/2020	
3	Electric charge, current, energy and potential	10/2/2020	
4	Resistance parameter - series and parallel combination	10//2020	
5	Inductance parameter -series and parallel combination	11/2/2020	
6	Capacitance parameter-series and parallel combination	11/2/2020	
7	Energy sources: Ideal, Non-ideal	12/2/2020	
8	Independent and dependent sources	12/2/2020	
9	Source transformation	13/2/2020	
10	Kirchoff's laws	13/2/2020	
11	Mesh analysis and Nodal analysis problem solving	13/2/2020	
12	Mesh analysis and Nodal analysis problem solving	10,11,12, 13/2/2020	
	A.C Fundamentals and Network Topology	14/2/2020	
13	Definitions of terms associated with periodic functions	14/2/2020	
14	Time period, Angular velocity and frequency	17/2/2020	
15	RMS value,Average value,Form factor and peak factor	17/2/2020	
16	RMS value,Average value,Form factor and peak factor	18/2/2020	
17	problem solving	18/2/2020	
18	problem solving	19/2/2020	
19	Phase angle, Phasor representation	24/2/2020	
20	Addition and subtraction of phasors	25/2/2020	
21	mathematical representation of sinusoidal quantities	25/2/2020	
22	explanation with relevant theory, problem solving	26/2/2020	
23	explanation with relevant theory, problem solving	26/2/2020	
24	Principal of Duality with examples	27/2/2020	
25	Definitions of branch, node, tree	27/2/2020	
26	planar, non-planar graph, incidence matrix	28/2/2020	
27	basic tie set schedule, basic cut set schedule	28/2/2020	

UNIT-II:Transients: **CO2 : Analyze the filter design concepts in real world applications.** **TB::Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000** **TB::Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning, TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH**			
28	First order differential equations	2/3/2020	Lecture interspersed with discussions
29	Definition of time constants	3/3/2020	
30	R-L circuit, R-C circuit with DC excitation	4/3/2020	
31	R-L circuit, R-C circuit with DC excitation	5/3/2020	
32	Evaluating initial conditions procedure	6/3/2020	
33	second order differential equations	9/3/2020	
34	homogeneous, non- homogenous	9/3/2020	
35	problem solving using RLC elements with DC excitation	11,12/3/2020	
36	problem solving using RLC elements with AC excitation	13/3/2020	
37	Response as related to s-plane rotation of roots	13/3/2020	
UNIT-III:Coupled Circuits **CO3 : Analyze the performance of periodic waveforms.** **TB:: Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000** **TB::Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning** **TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH**			
38	Self inductance, Mutual inductance	16/3/2020	Lecture interspersed with discussions
39	Coefficient of coupling, analysis of coupled circuits	16/3/2020	
40	Natural current, Dot rule of coupled circuits	17/3/2020	
41	Conductively coupled equivalent circuits	18/3/2020	
42	problem solving	19/3/2020	
43	Resonance: Introduction	20/3/2020	
44	Definition of Q, Series resonance	30/3/2020	
45	Bandwidth of series resonance, Parallel resonance	31/3/2020,1/4/2020	
46	Condition for maximum impedance	3/4/2020	
47	current in anti resonance	6,7,8,9/4/2020	
48	Bandwidth of parallel resonance	13,15,16,17/4/2020	
49	general case- resistance present in both branches	13,15,16,17/4/2020	
50	anti resonance at all frequencies	13,15,16,17/4/2020	
UNIT-IV:Network Theorems: **CO4 : To Understand the Network Theorems.** **TB :: Network Analysis – ME Van Valkenburg, Prentice Hall of India, 3rd Edition, 2000** **TB::Network Analysis by K.Satya Prasad and S Sivanagaraju, Cengage Learning, TB::Electric Circuit Analysis by Hayt and Kimmarle, TMH**			
51	Thevinin's, Norton's	20/4/2020	

TENTATIVE LESSON PLAN:ES1211

Course Title:BASIC ELECTRICAL ENGINEERING		
Section :A	Date: 06/02/2020	Page No: 1 of 2
Revision No:	Prepared by :B.INDRAJA	Approved by :HOD

Tools : Black board, PPTs

No.of periods	Topics	Date	Mode of Delivery
UNIT-I DC Machines **CO1 :Students are able to explain the operation of DC generator and analyze the characteristics of DC generator and the principle of operation, characteristics of DC motor. Methods of starting and speed control methods of DCmotors.** **TB:: T1: Principles Of Electrical Engineering by V.K. Mehata , Rohit Mehta**			
1	Introduction	06-02-2020	Lecture interspersed with discussions
2	Principle of operation of DC generator	07-02-2020	
3	emf equation	10-02-2020	
4,5,6,7	types of DC machines	10,11,12, 13-2-2020	
8	torque equation of DC motor	14-02-2020	
9	applications	17-02-2020	
10	three point starter	17-02-2020	
11	losses and efficiency	18-02-2020	
12	swinburne's test	19-02-2020	
13,14	speed control methods	24-02-2020	
15	OCC of DC generator	25-02-2020	
16	Brake test on DC Shunt motor	26-02-2020	
17	Numerical problems	27-02-2020	
18	tutorial	28-02-2020	
UNIT-II Transformers **CO2 :Students are ableto learn the constructional details, principle of operation and performance of transformers.** **TB:: T1: Principles Of Electrical Engineering by V.K. Mehata , Rohit Mehta**			
19	Introduction	02-03-2020	Lecture interspersed with discussions
20	Principle of operation of single phase transformer	02-03-2020	
21	constructional features	03-03-2020	
22	EMF equation	04-03-2020	
23	Losses and efficiency of	05-03-2020	
24	transformer regulation of transformer	06-03-2020	
25	OC & SC tests predetermination of efficiency and regulations	09-03-2020	
26	Sumpner's test	09-03-2020	
27,28	Numerical Problems	11,12-3-2020	
29	tutorial	13-03-2020	

UNIT-III Synchronous Generators & Motors
CO3 :Students are able to analyze the performance and speed – torque characteristics of a 3-phase induction motor and understand starting methods of 3-phase inductionmotor.
TB:: T1: Principles Of Electrical Engineering by V.K. Mehata , Rohit Mehta

30	Introduction	16-03-2020	Lecture interspersed with discussions
31	Principle of operation and construction of alternators	16-03-2020	
32	concept of phase angle and phase difference	17-03-2020	
33	types of alternators	18-03-2020	
34	Regulation of alternator by synchronous impedance method	19-03-2020	
35	EMF equation of three phase alternator	20-03-2020	
36,37	Construction of three phase synchronous motor	30-03-2020	
38,39	operating principle	31-3-2020,1-4-2020	
40	equivalent circuit of synchronous motor	03-04-2020	
41,42,43,44,45	Numerical Problems	6,7,8,9-4-2020	
46,47,48,49,50	tutorial	13,15,16,17-4-2020	

UNIT-IV Induction Machine
CO4 : Students are able to explain the operation of SynchronousMachines
TB :: T1: Principles Of Electrical Engineering by V.K. Mehata , Rohit Mehta

51,52	Introduction	20-04-2020	Lecture interspersed with discussions
53,54	Principle of operation and construction of three-phase induction motors	21,22-4-2020	
55,56	slip ring and squirrel cage motors	23,24-4-2020	
57,58	slip-torque characteristics	27-04-2020	
59,60	efficiency calculation	28,29-4-2020	
61,62	starting methods	30-4-2020,4-5-2020	
63,64	Brake test on 3-Phase Induction Motor	4,5-5-2020	
65,66	Numerical problems	6,7-5-2020	
67	tutorial	08-05-2020	

UNIT-V Special Machines
CO5 : Students are able to understand the operation of various specialmachines.
TB :: T1: Principles Of Electrical Engineering by V.K. Mehata , Rohit Mehta

68,69	Introduction	11-05-2020	Lecture interspersed with discussions
70,71	Principle of operation and construction	12,13-5-2020	
72,73	single phase induction motor	14,15-5-2020	
74	shaded pole motors	18-05-2020	
75,76	capacitor motors	18,19-5-2020	
77	AC servomotor	20-05-2020	
78,79	tutorial	21,22-5-2020	

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: ES1211

Course Title:BASIC ELECTRICAL ENGINEERING		
Section :	**Date: 6/2/2020**	
Revision No:	**Prepared by : T.Maha lakshmi**	**Page No: 1 of 3**
Tools : Black board, PPTs		**Approved by :HOD**

No.of periods	Topics	Date	Mode of Delivery
UNIT-I DC Machines			
CO1 :Students are able to explain the operation of DC generator and analyze the characteristics of DC generator.			
TB:: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications			
1	Principle of operation of DC generator	6/2/2020	Lecture interspersed with discussions
2,3	emf equation	7/2/2020	
4	types of DC machines	10/2/2020	
5,6	torque equation of DC motor	12/2/2020	
7	applications	13/2/2020	
8	three point starter	14/2/2020	
9	losses and efficiency	14/2/2020	
10	swinburne's test	17/2/2020	
11,12	speed control methods	19/2/2020	
13	OCC of DC generator	20/2/2020	
14	Brake test on DC Shunt motor	24/2/2020	
15	numerical problems	26/2/2020	
UNIT-II Transformers			
CO2 :Students are ableto 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			
TB:: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications			
16,17	Principle of operation of single phase transformer.	26/2/2020 27/2/2020	Lecture interspersed with discussions
18,19	constructional features	28/2/2020	
20	EMF equation	2/3/2020	
21,22	Losses and efficiency of	4/3/2020	
23,24,25	transformer regulation of transformer	5/3/2020 6/3/2020	
26,27	OC & SC tests predetermination of efficiency and regulations	9/3/2020, 11/3/2020	
28,29	Sumpner's test	11/3/2020 12/3/2020	
30	Numerical Problems	13/3/2020	

UNIT-III Synchronous Generators & Motors

CO3 :Students are able to analyze the performance and speed – torque characteristics of a 3-phase induction motor and understand starting methods of 3-phase inductionmotor.

TB:: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications

31,32	Principle of operation and construction of alternators	13/3/2020 16/3/2020	Lecture interspersed with discussions
33,34	concept of phase angle and phase difference	18/3/2020	
35,36,37,38	types of alternators	19/3/2020 20/3/2020	
39,40	Regulation of alternator by synchronous impedance method	30/3/2020 1/4/2020	
41, 42	EMF equation of three phase alternator	1/4/2020 2/4/2020	
43	Construction of three phase synchronous motor .	3/4/2020	
44,45	operating principle	6/4/2020, 8/4/2020	
46,47	equivalent circuit of synchronous motor	8/4/2020 9/4/2020	

UNIT-IV Induction Machine

CO4 : Students are able to explain the operation of SynchronousMachines

TB :: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications

48, 49, 50	Principle of operation and construction of three-phase induction motors	13/4/2020 15/4/2020	Lecture interspersed with discussions
51, 52	slip ring and squirrel cage motors	16/4/2020 17/4/2020	
53,54	slip-torque characteristics	20/4/2020 22/4/2020	
55,56	efficiency calculation	23/4/2020 24/4/2020	
57,58	starting methods	27/4/2020 29/4/2020	
59, 60	Brake test on 3-Phase Induction Motor	30/4/2020 4/5/2020	

UNIT-V Special Machines

CO5 : Students are able to understand the operation of various specialmachines.

TB :: Principles of Electrical Machines by V.K. Mehta & Rohit Mehta, S.Chandpublications

61,62,63	Principle of operation and construction	6/5/2020 7/5/2020	Lecture interspersed with discussions
64,65	single phase induction motor	8/5/2020 11/5/2020	
66,67	shaded pole motors	13/5/2020 14/5/2020	
68,69	capacitor motors	15/5/2020 18/5/2020	

70,71,72	AC servomotor	20/5/2020 21/5/2020 23/5/2020	

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

COURSE STRUCTURE - R19

I Year – I SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1112	Fundamentals of Computer Science	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab	0	0	3	1.5
8	ES1105	IT Workshop	0	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
Total Credits			**16**	**0**	**12**	**19**

I Year – II SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	BS1202	Mathematics – II	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1201	Programming for Problem Solving using C	3	0	0	3
5	ES1213	Digital Logic Design	3	0	0	3
6	BS1205	Applied Physics Lab	0	0	3	1.5
7	HS1203	Communication Skills Lab	0	1	2	2
8	ES1202	Programming for Problem Solving using C Lab	0	0	3	1.5
9	PR1201	Engineering Exploration Project	0	0	2	1
10	MC1204	Constitution of India	3	0	0	0
Total Credits			**18**	**1**	**10**	**21**

TENTETIVE LESSON PLAN: R19BS1202

Course Title: MATHEMATICS - II			
Section : CSE A	**Date : 06/2/2020**		**Page No :** 01 of 03
Revision No : 00	**Prepared By : T.PRASANNA**		**Approved By : HOD**
Tools: Black board			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT – I: LINEAR SYSTEM OF EQUATIONS **CO1: To instruct the concept of Matrices in solving algebraic equations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	Introduction to matrices	6-2-2020	
2	Rank of matrix- definition, properties	7-2-2020	Lecture interspersed with discussions
3	Problems on rank by Echelon form	10-2-2020 11-2-2020	
4	Rank by normal form	12-2-2020 13-2-2020	
5	PAQ form problems	14-2-2020 15-2-2020	
6	Homogeneous system AX=0	17-2-2020 18-2-2020	
7	Non Homogeneous system AX=B	19-2-2020 20-2-2020	
8	Problems on rank method	22-2-2020	
9	Gauss Elimination method	24-2-2020	
10	Applications on finding current in a circuit	25-2-2020	
11	Eigenvalues-definition	26-2-2020	
12	Properties of Eigen values	27-2-2020	
13	Properties of Eigen values	28-2-2020	
14	Problems on finding Eigen values,vectors	29-2-2020	
15	Problems on finding Eigen values,vectors		
UNIT – II:CAYLEY HAMILTON THEOREM , QUADRATIC FORMS **CO2: To determine the eigen values and eigen vectors of a matrix and verification of Caley Hamilton theorem** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
16	Caley Hamilton theorem, verification, problems	2-3-2020	Lecture interspersed with discussions
17	Diagonalization – problems	3-3-2020	
18	Quadratic forms – definition, examples	4-3-2020	
19	Matrix form of a quadratic form	5-3-2020	
20	Canonical form of a quadratic form	9-3-2020	
21	Methods of reducing a QF in to canonical form	11-3-2020 12-3-2020	
22	Orthogonal reduction method	13-3-2020	
23	Congruent operations method	14-3-2020	
24	Lagrange's method	16-3-2020	
25	Problems on finding nature of a QF	17-3-2020	

UNIT – III: ITERATIVE METHODS **CO3: Evaluating lengths of plane curves, volumes and surface areas of solids of revolution.** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
26	Introduction	18-3-2020	Lecture interspersed with discussions
27	Method-1: Bisection Method	19-3-2020	
28	Problems	20-3-2020	
29	Method-II: Regular False Method	21-3-2020	
30	problems	30-3-2020	
31	Method-III: Iteration Method	31-3-2020	
32	problems	1-4-2020	
33	Method-IV: Newton Raphson Method	3-4-2020	
34	problems	4-4-2020	
35	Gauess-Jordan method	6-4-2020	
36	Gauess-Seidal iteration method	7-4-2020	
UNIT – IV: INTERPOLATION **CO4: Evaluating improper integrals by Gamma function , definite integral by Beta function** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
37	Introduction	8-4-2020	Lecture interspersed with discussions
38	Forward and backward differences	9-4-2020 13-4-2020	
39	Newton's forward interpolation formula - problems	15-4-2020 16-4-2020	
40	Newton's backward forward interpolation formula -problems	17-4-2020 18-4-2020	
41	problems	20-4-2020 21-4-2020	
42	Gauss Forward interpolation formula -problems	22-4-2020	
43	Gauss backward interpolation formula -problems	23-4-2020	
44	Lagrange's Interpolation formula	24-4-2020 25-4-2020	
45	problems	27-4-2020 28-4-2020	
46	operators	29-4-2020 30-4-2020	
UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ODE **CO5: To find gradient, divergent and curl by using differential operator** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
47	Trapezoidal rule	1-5-2020 2-5-2020	Lecture interspersed with discussions
48	Simpson's 1/3rd rule	4-5-2020 5-5-2020	
49	Simpson's 3/8rd rule	6-5-2020 7-5-2020	
50	Taylor's series	8-5-2020	

		11-5-2020	
51	problems	12-5-2020 13-5-2020	
52	Picard's method of successive approximation	14-5-2020 15-5-2020	
53	Euler's method	16-5-2020 18-5-2020	
54	Euler's modified method	19-5-2020 20-5-2020	
55	Runge- kutta method	21-5-2020	
56	Problems	22-5-2020	
57	Revision	23-5-2020	

Prayanna.j 6/11/20
Signature of Faculty

Signature of HOD 6/11/20

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1202

Course Title: MATHEMATICS - II		
Section : CSE – B	Date : 26-08-2019	Page No : 01 of 02
Revision No : 00	Prepared By : S.SUMAN	Approved By : HOD

Tools: Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: SOLVING SYSTEM OF LINEAR EQUATIONS, EIGEN VALUES AND EIGEN VECTORS **CO1: solve system of linear algebraic equations using Gauss elimination, Gauss Jordan, Gauss Seidel (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	Introduction to matrices	From 06-02-2020 To 22-02-2020	Lecture interspersed with discussions
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B		
8	Problems on rank method		
9	Gauss Elimination method		
10	Eigen values – definition		
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
UNIT – II:, CALEY-HAMILTON THEOREM, QUADRATIC FORMS **CO2: Develop the use of matrix algebra techniques that is needed by engineers for practical applications (L6)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley Hamilton theorem	From: 16-09-2019 To: 05-10-2019	Lecture interspersed with discussions
17	Diagonalization – problems		
18	Quadratic forms – definition, examples		
19	Matrix form of a quadratic form		
20	Canonical form of a quadratic form		
21	Methods of reducing a QF in to canonical form		
22	Orthogonal reduction method		
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		
UNIT-III : UNIT – III: ITERATIVE METHODS: **CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
26	Introduction	From: 07-10-2019 To: 19-10-2019 & From: 28-10-2019 To: 09-11-2019	Lecture interspersed with discussions
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method		
31	Problems		
33	Method – 3: Iteration method		
34	Problems		
35	Method – 4: Newton Raphson method		
36	Problems		
37	Newton Raphson method simultaneous equations		
38	Gauss Jacobi Method		
39	Gauss Seidal Method		
40	problems		
UNIT – IV: INTERPOLATION **CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
41	Introduction: Forward and Backward Differences		

42	Newton's Forward interpolation formula	From: 11-11-2019 To: 30-11-2019	Lecture interspersed with discussions
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems		
46	Gauss Forward interpolation formula – Problems		
47	Problems		
48	Gauss Backward interpolation formula – Problems		
49	Problems		
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		
UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION **CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
53	Trapezoidal rule	From 04-05-2020 To 23-05-2020	Lecture interspersed with discussions
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method		
58	Problems		
59	Picard's method of successive approximation		
60	Euler's method		
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Course Title: MATHEMATICS - III			
Section : CSE A	Date :		Page No : 01 of 04
Revision No : 00	Prepared By: S.SUMAN		Approved By : HOD
Tools: Black board			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT – I: VECTOR CALCULUS **CO1: To interpretthephysical meaningofdifferentoperatorssuchasgradient,curlanddivergence, to estimatetheworkdoneagainstafield, circulationandfluxusingvectorcalculus** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	**Vector Differentiation:**Introduction	From: 6/2/2020 To 25/2/2020	Lecture interspersed with discussions
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	**Vector Integration**: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
UNIT – II: LAPLACE TRANSFORMS **CO2: To applytheLaplacetransformfor solvingdifferentialequations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
22	Laplace Transforms: Definitions, Existence	From 26/2/2020 To 11/3/2020	Lecture interspersed with discussions
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties Change of scale property		
25	Laplace Transforms of derivatives; Integrals		
26	$L(t^n f(t))$		
27	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	**Inverse Laplace Transforms:** Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
UNIT – III: FOURIER SERIES AND FOURIER TRANSFORMS **CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
34	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions		
39	Change of interval		
40	Half range sine and cosine series		
41	Fourier transforms		
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		
UNIT – IV: PDE OF FIRST ORDER **CO4:Toidentifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
48	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		
51	Solutions of PDE		
52	Method of grouping		
53	Method of multipliers		
54	Nonlinear PDE $f(p,q)=0$		
55	Nonlinear PDE $f(p,q,z)=0$		
56	Nonlinear PDE $f(p,x)=g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n)=0$		
60	$f(pz^m, qz^m)=0$		
UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS			

CO5: identifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications			To
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
62	$\sin(ax+by)$; $\cos(ax+by)$		
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Course Title: MATHEMATICS - III			
Section : CSE B	**Date :**	**Page No :** 01 of 04	
Revision No : 00	**Prepared By: V.PRASANTHI**	**Approved By : HOD**	
Tools: Black board			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT – I: VECTOR CALCULUS **CO1: To interpretthephysical meaningofdifferentoperatorssuchasgradient,curlanddivergence, to estimatetheworkdoneagainstafield, circulationandfluxusingvectorcalculus** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	**Vector Differentiation:**Introduction	From: 6/2/2020 To 25/2/2020	Lecture interspersed with discussions
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	**Vector Integration**: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
UNIT – II: LAPLACE TRANSFORMS **CO2: To applytheLaplacetransformfor solvingdifferentialequations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
22	Laplace Transforms: Definitions, Existence	From 26/2/2020 To 11/3/2020	Lecture interspersed with discussions
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties Change of scale property		
25	Laplace Transforms of derivatives; Integrals		
26	$L(t^n f(t))$		
27	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	**Inverse Laplace Transforms:** Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
UNIT – III: FOURIER SERIES AND FOURIER TRANSFORMS **CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
34	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions		
39	Change of interval		
40	Half range sine and cosine series		
41	Fourier transforms		
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		
UNIT – IV: PDE OF FIRST ORDER **CO4:Toidentifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
48	Introduction	From 12/4/2020 To 26/4/2020	Lecture interspersed with discussions
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		
51	Solutions of PDE		
52	Method of grouping		
53	Method of multipliers		
54	Nonlinear PDE $f(p,q)=0$		
55	Nonlinear PDE $f(p,q,z)=0$		
56	Nonlinear PDE $f(p,x)=g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n)=0$		
60	$f(pz^m, qz^m)=0$		
UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS			

CO5: identifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications			To
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
62	$\sin(ax+by)$; $\cos(ax+by)$		
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1204

Course Title: Applied Physics		
Section : CSE A	Date : 04.02.2020	Page No : 00
Revision No :00	Prepared By : D UDAYA KEERTHI	Approved By : HOD
Tools:		

No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT -I	**UNIT- I WAVE OPTICS** **CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments.		Lecture interspersed with discussions
1	Introduction, Principle of Super Position	07/02/20 To 06/03/20	
2	Interference of light, Conditions for Sustained Interference		
3	Interference in thin films		
4	Newton Rings		
5	Newton Rings, Problems		
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit		
8	Double slit, N-Slit		
9	Circular aperture, Intensity distribution curves		
10	Rayleigh Criterion		Lecture interspersed with discussions
11	Diffraction Grating		
12	Resolving Power of Telescope, Grating		
13	RP OF Microscope		
14	Problems		
UNIT II	**QUANYUM MECHANICS:** **CO2:** Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20 To 14/03/20	
16	Davison and German expt,		
17	G.P.Thomson expt,		
18	Hesenberg uncertainty principle		
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		
UNIT-III	**CLASICAL FREE ELECTRON THEORY AND BAND THEORY OF SOLIDS** **CO3:**Analyze the effect of temperature on Fermi-Dirac distribution function and summarize various types of solids based on band theory. electron theory in the study of electrical conductivity.		Lecture interspersed with discussions
23	Classical free electron theory, merits and demerits	15/03/20 To 13/04/20	
24	Quantum free electron theory		
25	Fermi Dirac distribution function and its temperature dependendence		
26	Fermi energy, Density of states		
27	Blochs theorem, Kronig penney model		
28	Kronig penney model		
29	Energy bands- Classification of materials		

29	Energy bands- Classification of materials	06/04/20	Lecture interspersed with discussions
30	E vs K Diagram-Effective mass of electron-	08/04/20	
31	M vs k diagram, concept of hole	11/04/20	
32	Problems	13/04/20	
UNIT-IV:	**SEMICONDUCTUR PHYSICS** **CO4:** Classify the energy bands of semiconductors, out line the properties of N and P type semiconductors and identify the type of semiconductor using Hall effect .		
33	Introduction-Intrinsic semiconductor	15/04/20	
34	Density of charge carriers, electrical conductivity	15/04/20	
35	Fermi level-extrinsic semiconductors	16/04/20	
36	p-type and n-type-density of charge carriers	16/04/20	
37	Dependence of Fermi energy on carrier concentration and	22/04/20	
38	temperature, Hall effect,	25/04/20	
39	Hall co-efficient, Applications of Hall effect	29/04/20	Lecture interspersed with discussions
40	Drift and diffusion currents	30/04/20	
41	Einstein's Equation	02/05/20	
42	Problems	04/05/20	
UNIT- V	**MAGNETISM & DIELECTRICS** **CO5:** . Explain the applications of dielectric and magnetic materials and apply the concept of magnetism to magnetic devices.		
43	**MAGNETISM**: Introduction	06/05/20	
44	Magnetic dipole momentum, Magnetization-	07/05/20	
45	Magnetic susceptibility and permeability	07/05/20	
46	Origin of permanent magnetic moment	09/05/20	Lecture interspersed with discussions
47	Bohr Magneton -Classification of magnetic materials (Dia, Para and Ferro)	09/05/20	
48	Soft and hard magnetic materials	11/05/20	
49	Applications of Ferromagnetic material	11/05/20	
50	Problems	13/05/20	
51	**DIELECTRICS:** Introduction,		
52	Dielectric polarization	13/05/20	
53	Susceptibility and Dielectric constant	14/05/20	
54	Types of polarizations: Electronic and Ionic (Quantitative),	14/05/20	
55	Orientation polarizations	16/05/20	
56	Lorentz internal field	18/05/20	
57	Claussius Mossoti equation-	20/05/20	
58	Entrinsic SC's	21/05/20	
59	Drift & Diffusion	23/05/20	
60	Einstein's Equation	23/05/20	
61	Hall Effect & Problems	25/05/20	

Signature of Faculty

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

Signature of HOD

TENTATIVE LESSON PLAN: R19BS1204

Course Title: Applied Physics		
Section : CSE B	Date : 04.02.2020	Page No : 00
Revision No :00	Prepared By : D UDAYA KEERTHI	Approved By : HOD
Tools:		

No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT -I	**UNIT- I WAVE OPTICS** **CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments.		Lecture interspersed with discussions
1	Introduction, Principle of Super Position	06/02/20 To 06/03/20	
2	Interference of light, Conditions for Sustained Interference		
3	Interference in thin films		
4	Newton Rings		
5	Newton Rings, Problems		
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit		
8	Double slit, N-Slit		
9	Circular aperture, Intensity distribution curves		Lecture interspersed with discussions
10	Rayleigh Criterion		
11	Diffraction Grating		
12	Resolving Power of Telescope, Grating		
13	RP OF Microscope		
14	Problems		
UNIT II	**QUANYUM MECHANICS:** **CO2:** Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20 To 14/03/20	
16	Davison and German expt,		
17	G.P.Thomson expt,		
18	Hesenberg uncertainty principle		
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		Lecture interspersed with discussions
UNIT-III	**CLASICAL FREE ELECTRON THEORY AND BAND THEORY OF SOLIDS** **CO3:**Analyze the effect of temperature on Fermi-Dirac distribution function and summarize various types of solids based on band theory. electron theory in the study of electrical conductivity.		
23	Classical free electron theory, merits and demerits	15/03/20 To 13/04/20	
24	Quantum free electron theory		
25	Fermi Dirac distribution function and its temperature dependendence		
26	Fermi energy, Density of states		
27	Blochs theorem, Kronig penney model		
28	Kronig penney model		
29	Energy bands- Classification of materials		

30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		
UNIT-IV:	**SEMICONDUCTUR PHYSICS** **CO4:** Classify the energy bands of semiconductors, out line the properties of N and P type semiconductors and identify the type of semiconductor using Hall effect .		Lecture interspersed with discussions
33	Introduction-Intrinsic semiconductor	15/04/20 To 04/05/20	
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers		
37	Dependence of Fermi energy on carrier concentration and		
38	temperature, Hall effect,		
39	Hall co-efficient, Applications of Hall effect		Lecture interspersed with discussions
40	Drift and diffusion currents		
41	Einstein's Equation		
42	Problems		
UNIT- V	**MAGNETISM & DIELECTRICS** **CO5:** . Explain the applications of dielectric and magnetic materials and apply the concept of magnetism to magnetic devices.		
43	**MAGNETISM**: Introduction	06/05/20 To 13/05/20	
44	Magnetic dipole momentum, Magnetization-		
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment		
47	Bohr Magneton -Classification of magnetic materials (Dia, Para and Ferro)		Lecture interspersed with discussions
48	Soft and hard magnetic materials		
49	Applications of Ferromagnetic material		
50	Problems		
51	**DIELECTRICS:** Introduction,	14/05/20 To 25/05/20	
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic (Quantitative),		
55	Orientation polarizations		
56	Lorentz internal field		
57	Claussius Mossoti equation-		
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

SRK INSTITUTE OF TECHNOLOGY
VIJAYAWADA

S.R.K INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
DEPARTMENT OF SCIENCE AND HUMANITIES

TENTATIVE LESSON PLAN

Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (R19ES1201)		
Section : Sec A	Date : 26/8/2019	Page No : 01 of 03
Revision No : 00	Prepared By : G. Keerthi	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I	**Introduction to C language** **CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.** **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**		
1	Computer Systems	27-8-19	Lecture Interspersed With discussions
2	Computing Environments	28-8-19	
3	Computer languages	28-8-19	
4	Creating and running Programs	29-8-19	
5	Computer Numbering System	30-8-19	
6	Storing Integers	31-8-19	
7	Storing Real Numbers	3-9-19	
8	C Programs, Identifiers	4-9-19	
9	Types, Variable	4-9-19	
10	Constants, Input/output	5-9-19	
11	Programming Examples	6-9-19	
12	Scope, Storage Classes and Type Qualifiers	7-9-19	
13	Expressions Precedence and Associativity	11-9-19	
14	Side Effects, Evaluating Expressions	11-9-19	
15	Type Conversion Statements	12-9-19	
16	Simple Programs	13-9-19	
17	Command Line Arguments	17-9-19	
18	**Tutorial**	17-9-19	
UNIT-II	**Operators, Selection and Repetition** **CO2: To gain knowledge of the operators, selection, control statements and repetition in C.** **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**		
19	Exact Size Integer Types	18-9-19	
20	Logical Bitwise Operators	18-9-19	
21	Shift Operators	19-9-19	

22	Logical Data and Operators	20-9-19	Lecture interspersed with discussions
23	Two Way Selection	21-9-19	
24	Multiway Selection	24-9-19	
25	More Standard Functions	25-9-19	
26	Concept of Loop	25-9-19	
27	Pretest and Post-test Loops	26-9-19	
28	Initialization and Updating	27-9-19	
29	Event and Counter Controlled Loops	28-9-19	
30	Loops in C	1-10-19	
31	Other Statements Related to Looping	3-10-19	
32	Looping Applications	4-10-19	
33	Programming Example The Calculator Program	5-10-19	
35	Tutorial	5-10-19	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III Arrays, String, Enum, Structure, Unions			
CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
36	Concepts, Using Array in C	15-10-19	Lecture interspersed with discussions
37	Array Application	16-10-19	
38	Two Dimensional Arrays	16-10-19	
39	Multidimensional Arrays	17-10-19	
40	Programming Example – Calculate Averages	18-10-19	
41	String Concepts, C String	19-10-19	
42	String Input / Output Functions	29-10-19	
43	Arrays of Strings	30-10-19	
44	String Manipulation Functions	30-10-19	
45	String/ Data Conversion	31-10-19	
46	A Programming Example – Morse Code	1-11-19	
47	The Type Definition (Type def)	2-11-19	
48	Enumerated Types	5-11-19	
49	Structure	6-11-19	
50	Unions	6-11-19	
51	Programming Application	7-11-19	
52	Tutorial	7-11-19	
UNIT-IV Pointers			
CO4: To assimilate about pointers, dynamic memory allocation and know the significance of			

Preprocessor. **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
53	Introduction	8-11-19	Lecture interspersed with discussions
54	Pointers to pointers	12-11-19	
55	Compatibility, L value and R value	13-11-19	
56	Arrays, and Pointers	13-11-19	
57	Pointer Arithmetic and Arrays	14-11-19	
58	Memory Allocation Function	15-11-19	
59	Array of Pointers	16-11-19	
60	Programming Application	19-11-19	
61	Processor Commands	20-11-19	
62	Tutorial	20-11-19	
UNIT-V Files and Functions **CO5: To assimilate about File I/O and significance of functions.** **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**			
63	Files, Streams	21-11-19	Lecture interspersed with discussions
64	Standard Library Input / Output Functions	22-11-19	
65	Formatting Input / Output Functions	23-11-19	
66	Character Input / Output Functions	26-11-19	
67	Text versus Binary Streams	27-11-19	
68	Functions for Files	27-11-19	
69	Converting File Type	28-11-19	
70	Designing, Structured Programs	29-11-19	
71	Function in C	30-11-19	
72	User Defined Functions	3-12-19	
73	Inter-Function Communication	4-12-19	
74	Standard Functions	4-12-19	
75	Passing Array to Functions	5-12-19	
76	Passing Pointers to Functions	10-12-19	
77	Recursion	12-12-19	
78	Passing an Array to Function	17-12-19	
79	**Tutorial**	19-12-19	

G. Keerthi
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

SRK INSTITUTE OF TECHNOLOGY
VIJAYAWADA

S.R.K INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
DEPARTMENT OF SCIENCE AND HUMANITIES

TENTATIVE LESSON PLAN

Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C (R19ES1201)		
Section : Sec B	**Date : 26/8/2019**	**Page No :** 01 of 03
Revision No : 00	**Prepared By : M.V.Sumanth**	**Approved By : HOD**

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I	**Introduction to C language**		
CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
1	Computer Systems	26-8-19	Lecture Interspersed With discussions
2	Computing Environments	28-8-19	
3	Computer languages	29-8-19	
4	Creating and running Programs	30-8-19	
5	Computer Numbering System	30-8-19	
6	Storing Integers	31-8-19	
7	Storing Real Numbers	2-9-19	
8	C Programs, Identifiers	4-9-19	
9	Types, Variable	5-9-19	
10	Constants, Input/output	6-9-19	
11	Programming Examples	6-9-19	
12	Scope, Storage Classes and Type Qualifiers	7-9-19	
13	Expressions Precedence and Associativity	9-9-19	
14	Side Effects, Evaluating Expressions	12-9-19	
15	Type Conversion Statements	13-9-19	
16	Simple Programs	13-9-19	
17	Command Line Arguments	16-9-19	
18	**Tutorial**	16-9-19	
UNIT-II	**Operators, Selection and Repetition**		
CO2: To gain knowledge of the operators, selection, control statements and repetition in C.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
19	Exact Size Integer Types	18-9-19	
20	Logical Bitwise Operators	19-9-19	
21	Shift Operators	20-9-19	

22	Logical Data and Operators	20-9-19	Lecture interspersed with discussions
23	Two Way Selection	21-9-19	
24	Multiway Selection	23-9-19	
25	More Standard Functions	25-9-19	
26	Concept of Loop	26-9-19	
27	Pretest and Post-test Loops	27-9-19	
28	Initialization and Updating	27-9-19	
29	Event and Counter Controlled Loops	28-9-19	
30	Loops in C	30-9-19	
31	Other Statements Related to Looping	3-10-19	
32	Looping Applications	4-10-19	
33	Programming Example The Calculator Program	4-10-19	
35	**Tutorial**	4-10-19	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III	**Arrays, String, Enum, Structure, Unions**		
CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
36	Concepts, Using Array in C	5-10-19	Lecture interspersed with discussions
37	Array Application	14-10-19	
38	Two Dimensional Arrays	16-10-19	
39	Multidimensional Arrays	17-10-19	
40	Programming Example – Calculate Averages	18-10-19	
41	String Concepts, C String	18-10-19	
42	String Input / Output Functions	19-10-19	
43	Arrays of Strings	28-10-19	
44	String Manipulation Functions	30-10-19	
45	String/ Data Conversion	31-10-19	
46	A Programming Example – Morse Code	1-11-19	
47	The Type Definition (Type def)	1-11-19	
48	Enumerated Types	2-11-19	
49	Structure	4-11-19	
50	Unions	6-11-19	
51	Programming Application	7-11-19	
52	**Tutorial**	7-11-19	
UNIT-IV	**Pointers**		
CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			

SRK INSTITUTE OF TECHNOLOGY
VIJAYAWADA

S.R.K INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
DEPARTMENT OF SCIENCE AND HUMANITIES

No. of Periods	TOPIC	Date	Mode of Delivery
53	Introduction	8-11-19	Lecture interspersed with discussions
54	Pointers to pointers	8-11-19	
55	Compatibility, L value and R value	11-11-19	
56	Arrays, and Pointers	13-11-19	
57	Pointer Arithmetic and Arrays	14-11-19	
58	Memory Allocation Function	15-11-19	
59	Array of Pointers	15-11-19	
60	Programming Application	16-11-19	
61	Processor Commands	18-11-19	
62	**Tutorial**	18-11-19	
UNIT-V Files and Functions **CO5: To assimilate about File I/O and significance of functions.** **TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE**			
63	Files, Streams	20-11-19	Lecture interspersed with discussions
64	Standard Library Input / Output Functions	21-11-19	
65	Formatting Input / Output Functions	22-11-19	
66	Character Input / Output Functions	22-11-19	
67	Text versus Binary Streams	23-11-19	
68	Functions for Files	25-11-19	
69	Converting File Type	27-11-19	
70	Designing, Structured Programs	28-11-19	
71	Function in C	29-11-19	
72	User Defined Functions	30-11-19	
73	Inter-Function Communication	2-12-19	
74	Standard Functions	4-12-19	
75	Passing Array to Functions	5-12-19	
76	Passing Pointers to Functions	6-12-19	
77	Recursion	11-12-19	
78	Passing an Array to Function	16-12-19	
79	**Tutorial**	18-12-19	

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: ES1213
DIGITAL LOGIC DESIGN

Course Title: DIGITAL LOGIC DESIGN		
Section: Sec A & B	**Date:** 04/11/2020	**Page No:** 1 to 4
Revision No: 00	**Prepared By:** Dr. B. Vanajakshi / N. Mayuri	**Approved By:** HOD

Tools: Black board, PPTs, and Online

S. No.	Topic	Date	Mode of Delivery
UNIT-I	**DIGITAL SYSTEMS AND BINARY NUMBERS**		
CO1: An ability to define different number systems, binary addition and subtraction, 2's complement representation and operations with this representation.			
TB1: Digital Design, 5/e, M. Morris Mano, Michael D Ciletti, PEA.			
1	Digital Systems	**From: 06-02-2020 To: 18-02-2020**	Lecture interspersed with discussions
2	Binary Numbers		
3	Octal and Hexadecimal Numbers		
4	Complements of Numbers		
5	Signed Binary Numbers		
6	Arithmetic addition and subtraction		
7	4-bit codes: BCD, EXCESS 3		
8	9's complement, 2421		
9	alphanumeric codes		
UNIT-II	**CONCEPT OF BOOLEAN ALGEBRA**		
CO2: An ability to understand the different switching algebra theorems and apply them for logic functions.			
TB1: Digital Design, 5/e, M. Morris Mano, Michael D Ciletti, PEA.			
10	Basic Theorems		
11	Properties of Boolean algebra		
12	Boolean Functions		
13	Canonical and Standard Forms		
14	Minterms and Maxterms.		
15	Problems on sop and pos		

36	T and D Flip Flops, Truth and Excitation Tables		
37	Conversion of Flip Flops.		
UNIT-V REGISTERS AND COUNTERS **CO5:** Able to design various sequential circuits starting from flip-flop to registers and counters. **TB2: Digital Logic and Computer Design, M. Morris Mano, PEA.**			
38	Registers	**From: 15-05-2020** **To: 29-05-2020**	Online
39	Shift Registers		
40	Ripple Counters		
41	Synchronous Counters		
42	Ring Counter, Johnson Counter.		

TB1: Digital Design, 5/e, M. Morris Mano, Michael D Ciletti, PEA.
TB2: Digital Logic and Computer Design, M. Morris Mano, PEA.

Signature of the Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE STRUCTURE - R19

I Year – I SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	HS1101	English	3	0	0	3
2	BS1101	Mathematics - I	3	0	0	3
3	BS1106	Applied Chemistry	3	0	0	3
4	ES1112	Fundamentals of Computer Science	3	0	0	3
5	ES1103	Engineering Drawing	1	0	3	2.5
6	HS1102	English Lab	0	0	3	1.5
7	BS1107	Applied Chemistry Lab	0	0	3	1.5
8	ES1105	IT Workshop	0	0	3	1.5
9	MC1101	Environmental Science	3	0	0	0
Total Credits			**16**	**0**	**12**	**19**

I Year – II SEMESTER

S. No	Course Code	Subjects	L	T	P	Credits
1	BS1202	Mathematics – II	3	0	0	3
2	BS1203	Mathematics – III	3	0	0	3
3	BS1204	Applied Physics	3	0	0	3
4	ES1201	Programming for Problem Solving using C	3	0	0	3
5	ES1213	Digital Logic Design	3	0	0	3
6	BS1205	Applied Physics Lab	0	0	3	1.5
7	HS1203	Communication Skills Lab	0	1	2	2
8	ES1202	Programming for Problem Solving using C Lab	0	0	3	1.5
9	PR1201	Engineering Exploration Project	0	0	2	1
10	MC1204	Constitution of India	3	0	0	0
Total Credits			**18**	**1**	**10**	**21**

TENTATIVE LESSON PLAN: R19BS1202

Course Title: MATHEMATICS - II		
Section : IT	Date : 26-08-2019	Page No : 01 of 02
Revision No : 00	Prepared By : B.V.R.K.RAO	Approved By : HOD

Tools: Black board

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-1: SOLVING SYSTEM OF LINEAR EQUATIONS, EIGEN VALUES AND EIGEN VECTORS **CO1: solve system of linear algebraic equations using Gauss elimination, Gauss Jordan, Gauss Seidel (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	Introduction to matrices	From 06-02-2020 To 22-02-2020	Lecture interspersed with discussions
2	Rank of matrix- definition, properties		
3	Problems on rank by Echelon form		
4	Rank by normal form		
5	PAQ form problems		
6	Homogeneous system AX=0		
7	Non Homogeneous system AX=B		
8	Problems on rank method		
9	Gauss Elimination method		
10	Eigen values – definition		
11	Properties of Eigen values		
12	Properties of Eigen values		
13	Problems on finding eigen values, vectors		
14	Problems on finding eigen values, vectors		
UNIT – II:, CALEY-HAMILTON THEOREM, QUADRATIC FORMS **CO2: Develop the use of matrix algebra techniques that is needed by engineers for practical applications (L6)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
15	Caley Hamilton theorem, verification, problems		

16	Finding inverse and power of a matrix by caley Hamilton theorem	From: 16-09-2019 To: 05-10-2019	Lecture interspersed with discussions
17	Diagonalization – problems		
18	Quadratic forms – definition, examples		
19	Matrix form of a quadratic form		
20	Canonical form of a quadratic form		
21	Methods of reducing a QF in to canonical form		
22	Orthogonal reduction method		
23	Congruent operations method		
24	Lagrange's method		
25	Problems on finding nature of a QF		
UNIT-III : UNIT – III: ITERATIVE METHODS: **CO3: Avaluate approximating the roots of polynomial and transcendental equations by different algorithms (L5)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
26	Introduction	From: 07-10-2019 To: 19-10-2019 & From: 28-10-2019 To: 09-11-2019	Lecture interspersed with discussions
27	Method – 1: Bisection method		
28	Problems		
30	Method – 2: Regula falsi method		
31	Problems		
33	Method – 3: Iteration method		
34	Problems		
35	Method – 4: Newton Raphson method		
36	Problems		
37	Newton Raphson method simultaneous equations		
38	Gauss Jacobi Method		
39	Gauss Seidal Method		
40	problems		
UNIT – IV: INTERPOLATION **CO4: Apply Newton's forward & backward interpolation and Lagrange's formulae for equal and unequal intervals (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
41	Introduction: Forward and Backward Differences		

42	Newton's Forward interpolation formula	From: 11-11-2019 To: 30-11-2019	Lecture interspersed with discussions
43	Problems		
44	Newton's Backward interpolation formula		
45	Problems		
46	Gauss Forward interpolation formula – Problems		
47	Problems		
48	Gauss Backward interpolation formula – Problems		
49	Problems		
50	Lagranges interpolation formula – Problems		
51	Problems		
52	Operators		
UNIT – V: NUMERICAL INTEGRATION AND SOLUTION OF ORDINARY DIFFERENTIAL EQUATION **CO5: Apply different algorithms for approximating the solutions of ordinary differential equations to its analytical computations (L3)** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
53	Trapezoidal rule	From 04-05-2020 To 23-05-2020	Lecture interspersed with discussions
54	Simpson's 1/3 rule		
55	Problems		
56	Simpson's 3/8 rule		
57	Taylor's series method		
58	Problems		
59	Picard's method of successive approximation		
60	Euler's method		
61	Euler's modified method		
62	Problems		
63	Runge kutta method		
64	Problems		

Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19BS1203

Course Title: MATHEMATICS - III			
Section : IT	Date :		Page No : 01 of 04
Revision No : 00	Prepared By: G.KOTESWARAMMA		Approved By : HOD
Tools: Black board			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT – I: VECTOR CALCULUS **CO1: To interpretthephysical meaningofdifferentoperatorssuchasgradient,curlanddivergence, to estimatetheworkdoneagainstafield, circulationandfluxusingvectorcalculus** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
1	**Vector Differentiation:**Introduction	From: 6/2/2020 To 25/2/2020	Lecture interspersed with discussions
2	Properties of vectors and scalars		
3	Derivative of vector – definition		
4	Vector differential operator		
5	Gradient of a vector		
6	Divergence of a vector		
7	Curl of a vector		
8	Properties of gradient		
9	Vector identities		
10	Vector identities		
11	Problems on application of gradient		
12	Problems on divergence and curl		
13	**Vector Integration**: Introduction		
14	Problems on line integral		
15	Problems on line integral		
16	Problems on surface integrals		
17	Problems on volume integrals		
18	Problems on Greens theorem		
19	Problems on Green theorem		
20	Problems on Gauss divergence theorem		
21	Problems on stokes theorem		
UNIT – II: LAPLACE TRANSFORMS **CO2: To applytheLaplacetransformfor solvingdifferentialequations** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
22	Laplace Transforms: Definitions, Existence	From 26/2/2020 To 11/3/2020	Lecture interspersed with discussions
23	Laplace Transform of standard functions		
24	Linearity property; Shifting properties Change of scale property		
25	Laplace Transforms of derivatives; Integrals		
26	$L(t^n f(t))$		
27	Laplace Transforms of division by t		
28	Evaluation of integrals		

29	Laplace Transforms of periodic functions; unit step functions; Unit impulse functions		
30	**Inverse Laplace Transforms:** Finding L^{-1} using partial fractions		
31	Properties of inverse transform		
32	Convolution theorem		
33	Solutions of Difference Equations		
UNIT – III: FOURIER SERIES AND FOURIER TRANSFORMS **CO3:TO findorcomputetheFourierseriesofperiodicsignals ,abletoapply integral expressionsfor theforwardsandinverseFouriertransformtoarangeofnon-periodicwaveforms** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
34	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
35	Periodic functions		
36	Fourier series of periodic function		
37	Dirchlets conditions		
38	Even and odd functions		
39	Change of interval		
40	Half range sine and cosine series		
41	Fourier transforms		
42	Fourier integral theorem		
43	Fourier sine and cosine integrals		
44	Sine and cosine transforms		
45	Properties		
46	Inverse transforms		
47	Finite Fourier transforms		
UNIT – IV: PDE OF FIRST ORDER **CO4:To identifysolutionmethodsforpartialdifferentialequationsthatmodelphysicalprocesses** **TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications**			
48	Introduction	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
49	Formation of PDE by eliminating arbitrary constants		
50	Formation of PDE by eliminating arbitrary functions		
51	Solutions of PDE		
52	Method of grouping		
53	Method of multipliers		
54	Nonlinear PDE $f(p,q)=0$		
55	Nonlinear PDE $f(p,q,z)=0$		
56	Nonlinear PDE $f(p,x)=g(q,y)$		
57	Clairaut's equation		
58	PDE reducible to standard form		
59	$f(px^m, qy^n)=0$		
60	$f(pz^m, qz^m)=0$		
UNIT – V: SECOND ORDER PARTIAL DIFFERENTIAL EQUATIONS AND APPLICATIONS **CO5:**			

TB:" Engineering Mathematics", Dr. T.K.V.Iyengar; S.Chand publications			
61	Introduction; Homogeneous Linear P.D.E with constant coefficients; finding CF Finding PI: RHS term of the type $e^{(ax+by)}$	From 27/4/2020 To 7/5/2020	Lecture interspersed with discussions
62	$\sin(ax+by)$; $\cos(ax+by)$		
63	$x^m y^n$		
64	Method of separation of variables		
65	Solution of one dimensional wave equation		
66	Heat equation		
67	Two dimensional Laplace equation		

G. Koteswaramma
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19 BS1204

Course Title: Applied Physics		
Section : IT	Date : 04.02.2020	Page No : 00
Revision No :00	Prepared By : M.Vidya Elizabeth	Approved By : HOD
Tools:		

No. of Periods	TOPIC	DATE	Mode of Delivery
UNIT -I	**UNIT- I WAVE OPTICS** **CO1:** Analyze the differences between interference and diffraction with applications. And illustrate the resolving power of various optical instruments.		Lecture interspersed with discussions
1	Introduction, Principle of Super Position	07/02/20 To 06/03/20	
2	Interference of light, Conditions for Sustained Interference		
3	Interference in thin films		
4	Newton Rings		
5	Newton Rings, Problems		
6	Diffraction-Fraunhofer diffraction.		
7	Diffraction due to single slit		
8	Double slit, N-Slit		
9	Circular aperture, Intensity distribution curves		Lecture interspersed with discussions
10	Rayleigh Criterion		
11	Diffraction Grating		
12	Resolving Power of Telescope, Grating		
13	RP OF Microscope		
14	Problems		
UNIT II	**QUANYUM MECHANICS:** **CO2:** Explain the fundamental concepts of quantum mechanics. Analyze the physical significance of wave function and apply the Schrodinger wave equation for energy values of free particle.		
15	Introduction, Mater waves. De Broglie waves	07/03/20 To 14/03/20	
16	Davison and German expt,		
17	G.P.Thomson expt,		
18	Hesenberg uncertainty principle		Lecture interspersed with discussions
19	Schrodinger time dependent wave equation		
20	Schrodinger time independent wave equation		
21	Particle in a box		
22	Problems		
UNIT-III	**CLASICAL FREE ELECTRON THEORY AND BAND THEORY OF SOLIDS** **CO3:**Analyze the effect of temperature on Fermi-Dirac distribution function and summarize various types of solids based on band theory. electron theory in the study of electrical conductivity.		
23	Classical free electron theory, merits and demerits	15/03/20 To 13/04/20	
24	Quantum free electron theory		
25	Fermi Dirac distribution function and its temperature dependendence		
26	Fermi energy, Density of states		
27	Blochs theorem, Kronig penney model		
28	Kronig penney model		
29	Energy bands- Classification of materials		

30	E vs K Diagram-Effective mass of electron-		
31	M vs k diagram, concept of hole		
32	Problems		
UNIT-IV:	**SEMICONDUCTUR PHYSICS** **CO4:** Classify the energy bands of semiconductors, out line the properties of N and P type semiconductors and identify the type of semiconductor using Hall effect.		Lecture interspersed with discussions
33	Introduction-Intrinsic semiconductor	15/04/20 To 04/05/20	
34	Density of charge carriers, electrical conductivity		
35	Fermi level-extrinsic semiconductors		
36	p-type and n-type-density of charge carriers		
37	Dependence of Fermi energy on carrier concentration and		
38	temperature, Hall effect,		
39	Hall co-efficient, Applications of Hall effect		Lecture interspersed with discussions
40	Drift and diffusion currents		
41	Einstein's Equation		
42	Problems		
UNIT- V	**MAGNETISM & DIELECTRICS** **CO5:** . Explain the applications of dielectric and magnetic materials and apply the concept of magnetism to magnetic devices.		
43	**MAGNETISM**: Introduction	06/05/20 To 13/05/20	
44	Magnetic dipole momentum, Magnetization-		Lecture interspersed with discussions
45	Magnetic susceptibility and permeability		
46	Origin of permanent magnetic moment		
47	Bohr Magneton -Classification of magnetic materials (Dia, Para and Ferro)		
48	Soft and hard magnetic materials		
49	Applications of Ferromagnetic material		
50	Problems		
51	**DIELECTRICS:** Introduction,	14/05/20 To 25/05/20	
52	Dielectric polarization		
53	Susceptibility and Dielectric constant		
54	Types of polarizations: Electronic and Ionic (Quantitative),		
55	Orientation polarizations		
56	Lorentz internal field		
57	Claussius Mossoti equation-		
58	Entrinsic SC's		
59	Drift & Diffusion		
60	Einstein's Equation		
61	Hall Effect & Problems		

M.V. Elizabeth
Signature of Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: ES1213
DIGITAL LOGIC DESIGN

Course Title: DIGITAL LOGIC DESIGN		
Section: Sec I	**Date:** 04/11/2020	**Page No:** 1 to 4
Revision No: 00	**Prepared By:** Y.V.Nandini	**Approved By:** HOD

Tools: Black board, PPTs, and Online

S. No.	Topic	Date	Mode of Delivery
UNIT-I	**DIGITAL SYSTEMS AND BINARY NUMBERS**		
CO1: An ability to define different number systems, binary addition and subtraction, 2's complement representation and operations with this representation.			
TB1: Digital Design, 5/e, M. Morris Mano, Michael D Ciletti, PEA.			
1	Digital Systems	**From: 07-02-2020 To: 26-02-2020**	Lecture interspersed with discussions
2	Binary Numbers		
3	Octal and Hexadecimal Numbers		
4	Complements of Numbers		
5	Signed Binary Numbers		
6	Arithmetic addition and subtraction		
7	4-bit codes: BCD, EXCESS 3		
8	9's complement, 2421		
9	alphanumeric codes		
UNIT-II	**CONCEPT OF BOOLEAN ALGEBRA**		
CO2: An ability to understand the different switching algebra theorems and apply them for logic functions.			
TB1: Digital Design, 5/e, M. Morris Mano, Michael D Ciletti, PEA.			
10	Basic Theorems		
11	Properties of Boolean algebra		
12	Boolean Functions		
13	Canonical and Standard Forms		
14	Minterms and Maxterms.		
15	Problems on sop and pos		

36	T and D Flip Flops, Truth and Excitation Tables		
37	Conversion of Flip Flops.		
UNIT-V REGISTERS AND COUNTERS **CO5:** Able to design various sequential circuits starting from flip-flop to registers and counters. **TB2: Digital Logic and Computer Design, M. Morris Mano, PEA.**			
38	Registers	**From: 26-05-2020** **To: 6-06-2020**	Online
39	Shift Registers		
40	Ripple Counters		
41	Synchronous Counters		
42	Ring Counter, Johnson Counter.		

TB1: Digital Design, 5/e, M. Morris Mano, Michael D Ciletti, PEA.
TB2: Digital Logic and Computer Design, M. Morris Mano, PEA.

Y V Nandini
Signature of the Faculty

Signature of HOD

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

TENTATIVE LESSON PLAN: R19ES1201

PROGRAMMING FOR PROBLEM SOLVING USING C

Course Title: PROGRAMMING FOR PROBLEM SOLVING USING C		
Section : IT	Date : 06/02/2020	Page No : 01 of 03
Revision No : 00	Prepared By : SK. REHANA	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I	**Introduction to C language**		
CO1: To learn about the computer systems, computing environments, developing of a computer program and Structure of a C Program.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
1	Computer Systems	From: 6/2/2020 To 25/2/2020	Lecture Interspersed With discussions
2	Computing Environments		
3	Computer languages		
4	Creating and running Programs		
5	Computer Numbering System		
6	Storing Integers		
7	Storing Real Numbers		
8	C Programs, Identifiers		
9	Types, Variable		
10	Constants, Input/output		
11	Programming Examples		
12	Scope, Storage Classes and Type Qualifiers		
13	Expressions Precedence and Associativity		
14	Side Effects, Evaluating Expressions		
15	Type Conversion Statements		
16	Simple Programs		
17	Command Line Arguments		
18	Tutorial		
UNIT-II	**Operators, Selection and Repetition**		
CO2: To gain knowledge of the operators, selection, control statements and repetition in C.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
19	Exact Size Integer Types		Lecture interspersed with
20	Logical Bitwise Operators		
21	Shift Operators		
22	Logical Data and Operators		
23	Two Way Selection		
24	Multiway Selection		
25	More Standard Functions		

26	Concept of Loop	From 26/2/2020 To 11/3/2020	discussions
27	Pretest and Post-test Loops		
28	Initialization and Updating		
29	Event and Counter Controlled Loops		
30	Loops in C		
31	Other Statements Related to Looping		
32	Looping Applications		
33	Programming Example The Calculator Program		
35	Tutorial		
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**

UNIT-III Arrays, String, Enum, Structure, Unions

CO3: To learn about the design concepts of arrays, strings, enumerated structure and union types. To learn about their usage.

TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE

36	Concepts, Using Array in C	From 12/3/2020 To 11/4/2020	Lecture interspersed with discussions
37	Array Application		
38	Two Dimensional Arrays		
39	Multidimensional Arrays		
40	Programming Example – Calculate Averages		
41	String Concepts, C String		
42	String Input / Output Functions		
43	Arrays of Strings		
44	String Manipulation Functions		
45	String/ Data Conversion		
46	A Programming Example – Morse Code		
47	The Type Definition (Type def)		
48	Enumerated Types		
49	Structure		
50	Unions		
51	Programming Application		
52	Tutorial		

UNIT-IV Pointers

CO4: To assimilate about pointers, dynamic memory allocation and know the significance of Preprocessor.

TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE

No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
53	Introduction		Lecture interspersed
54	Pointers to pointers		
55	Compatibility, L value and R value		
56	Arrays, and Pointers		

57	Pointer Arithmetic and Arrays	From	with discussions
58	Memory Allocation Function		
59	Array of Pointers	13/4/2020	
60	Programming Application	To	
61	Processor Commands		
62	Tutorial	25/4/2020	
UNIT-V Files and Functions			
CO5: To assimilate about File I/O and significance of functions.			
TB1: Programming for Problem Solving, Behrouz A. Forouzan, Richard F.Gilberg, CENGAGE			
63	Function in C		
64	User Defined Functions		
65	Inter-Function Communication		
66	Standard Functions		
67	Passing Array to Functions	From	
68	Passing Pointers to Functions		
69	Recursion	27/4/2020	
70	Passing an Array to Function		Lecture interspersed with discussions
71	Files, Streams	To	
72	Standard Library Input / Output Functions		
73	Formatting Input / Output Functions	7/5/2020	
74	Character Input / Output Functions		
75	Text versus Binary Streams		
76	Functions for Files		
77	Converting File Type		
78	Designing, Structured Programs		
79	Tutorial		

Signature of Faculty

PRINCIPAL
SRK Institute of Technology
ENIKEPADU, VIJAYAWADA-521 108

Signature of HOD