



KSSEM

K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF BASIC SCIENCE

SESSION: 2021-2022 (ODD SEMESTER)
LESSON PLAN

NAME OF THE STAFF : NAGARATHNA T K
COURSE CODE/TITLE : 21MAT11 / CALCULUS AND DIFFERENTIAL EQUATIONS
SEMESTER/YEAR : I - (ECE) / I

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Delivery Date
MODULE 1							
1	Polar curves - angle between the radius vector and tangent	L+D	Black Board	2	2	20-12-2021 21-12-2021	20-12-2021 21-12-2021
2	Angle between two curves.	L+D	Black Board	1	3	21-12-2021	21-12-2021
3	Pedal Equations-Problems	L+D	Black Board	1	4	22-12-2021	22-12-2021
4	Curvature and radius of curvature- Cartesian, Parametric forms	L+D	Black Board	2	6	24-12-2021 27-12-2021	27-12-2021 28-12-2021
5	Curvature and radius of curvature- Polar, Pedal forms.	L+D	Black Board	2	8	28-12-2021 28-12-2021	28-12-2021 29-12-2021
6	Self Study- Center and circle of curvature.	L+D	Black Board	0	8	29-12-2021	31-12-2021
7	Self Study- Evolutes and Involutes.	L+D	Black Board	0	8	31-12-2021	03-01-2022
8	Problem Solving-(Tutorials)	L+D	Black Board	0	8	03-01-2022	04-01-2022
9	REVISION	L+D	Black Board	0	8	04-01-2022	04-01-2022
MODULE 2							
11	Taylor's and Maclaurin's series expansions for one variable	L+D	MS Teams	2	10	04-01-2022 05-01-2022	05-01-2022 10-01-2022
12	Indeterminate forms - L'Hospital's rule.	L+D	MS Teams	1	11	07-01-2022	11-01-2022
13	Assignment-1	0	...		
14	Partial differentiation; Total derivatives-differentiation of composite functions.	L+D	MS Teams	2	13	08-01-2022 10-01-2022	12-01-2022 14-01-2022
15	Jacobian	L+D	MS Teams	1	14	11-01-2022	15-01-2022

16	Maxima and minima for a function of two Variables	L+D	MS team	2	16	11-01-2022	28-01-2021
17	Self Study-Euler's Theorem and Problems.	L+D	Blackboard	0	16	12-01-2022	04-02-2021
18	Self Study- Method of Lagrange undetermined multipliers with Single Constraint	L+D	R	0	16	17-01-2022	07-02-2021
19	Problem Solving-(Tutorials)	L+D	RB	0	16	18-01-2022	08-02-2021
20	REVISION	L+D	RB	0	16	19-01-2022	15-02-2021

MODULE 3

22	Linear Algebra-Rank of a matrix-Echelon form	L+D	RB	2	18	24-01-2022	22-02-2021
23	Solution of system of linear equations- Gauss elimination method	L+D	RB	1	19	25-01-2022	23-02-2021
24	Gauss Jordan method	L+D	RB	1	20	28-01-2022	23-02-2021
25	Approximate solution by Gauss Seidal method	L+D	RB	2	22	31-01-2022	25-02-2021
26	Eigen values and Eigen vectors method	L+D	RB	1	23	01-02-2022	05-03-2021
27	Rayleigh's power method	L+D	RB	1	24	02-02-2022	05-03-2021
28	Self Study- Solution of System of equations by Gauss-Jacobi iterative method.	L+D		0	24	04-02-2022	07-03-2021
29	Self-Study-Inverse of a square matrix by Cayley-Hmlton theorem.	L+D	RB	0	24	05-02-2022	08-03-2021
30	Problem Solving-(Tutorials)	L+D		0	24	07-02-2022	08-03-2021
32	Assignment-2	---	---	0	---		
33	REVISION	L+D	RB	0	24	08-02-2022	11-03-2021

MODULE 4

34	Exact and reducible to exact differential equations. Bernoulli's equation	L+D	RB	2	26	08-02-2022	14-03-2021
35	Applications of ODE's-orthogonal trajectories	L+D	RB	2	28	11-02-2022	15-03-2021
36	Newton's law of cooling	L+D	RB	1	29	14-02-2022	15-03-2021
37	Nonlinear differential equations: Introduction to general and singular solutions; Solvable for p only;	L+D	RB	2	31	15-02-2022	16-03-2021
38	Clairaut's and reducible to Clairaut's equations only	L+D	RB	1	32	18-02-2022	17-03-2021
39	Self Study- Applications of	L+D	RB	0	32	19-02-2022	17-03-2021

	ODE's -L-R circuits								
40	Self Study- Applications of ODE's- Solvable for X and Y	L+D			0	32	25-02-2022	18-3-2021	
41	Problem Solving-(Tutorials)	L+D			0	32	28-02-2022	19-3-2021	
43	REVISION	L+D			0	32	02-03-2022	21-3-2021	

MODULE 5

44	Higher order linear ODE's with constant coefficients:-Inverse differential operators, Method of variation of parameters	L+D			2	34	04-03-2022	22-3-2021
45	Cauchy's homogeneous equations-Problems	L+D			2	36	05-03-2022	22-3-2021
46	Legendre homogeneous equations-Problems	L+D			2	38	07-03-2022	23-3-2021
47	Self Study-Applications to oscillations of a spring.	L+D			2	40	08-03-2022	23-3-2021
48	Self Study-L-C-R circuits	L+D			0	40	09-03-2022	23-3-2021
49	Problem Solving-(Tutorials)	L+D			0	40	11-03-2022	24-3-2021
50	Assignment-3 Student Activity	L+D			0	40	14-03-2022	24-3-2021
52	REVISION	L+D			0	40	15-03-2022	25-3-2021
53	REVISION	L+D			0	40	16-03-2022	25-3-2021
54	REVISION	L+D			0	40	18-03-2022	26-3-2021
55	REVISION	L+D			0	40	19-03-2022	28-3-2021

Mode of Assignments and Instructions		Date
Assignment 1	Assignment questions are given to solve:	12/2/2022
Assignment 2	Assignment questions are given to solve	18/2/2022
Assignment 3	Quiz; Google form link shared to the students	07/04/2022

Total No. of Lecture Hours = 40

Total No. of Tutorial Hours = 5

Total No. of Self study Hours = 07

Total No. of Revision Hours = 13


Course In charge


Head of the Department

DR. C. VASUDEVA
Professor & Head
Department of Basic Sciences
K S School of Engineering and Management
Bengaluru - 560 109


Principal

Dr. K. RAMA NARASIMHA
Principal/Director
K S School of Engineering and Management
Bengaluru - 560 109



K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NAME OF THE STAFF : Mrs. K.V.Shalini

COURSE CODE/TITLE : 18CS734 / User Interface Design

SEMESTER/SEC/YEAR : VII/A/IV

ACADEMIC YEAR : 2021-22

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Engaged Date
MODULE 1: The User Interface							
1	Introduction	L+D	BB+LCD	1	1	1/10/2021	1/10
2	Overview of UID	L+D	BB+LCD	1	2	4/10/2021	4/10
3	The importance of user interface	L+D	BB+LCD	1	3	7/10/2021	5/10
4	The importance of user interface	L+D	BB+LCD	1	4	8/10/2021	11/10
5	Defining the user interface	L+D	BB+LCD	1	5	9/10/2021	13/10
6	The importance of good design	L+D	BB+LCD	1	6	11/10/2021	18/10
7	Characteristics of graphical and web user interfaces.	L+D	BB+LCD	1	7	13/10/2021	22/10
8	Principles of user interface Design	L+D	BB+LCD	1	8	18/10/2021	22/10
9	Tutorial	L+D	BB+LCD	0	8	21/10/2021	25/10
MODULE 2: The User Interface Design process							
10	Obstacles, Usability.	L+D	BB+LCD	1	9	22/10/2021	27/10
11	Human characteristics in Design	L+D	BB+LCD	1	10	23/10/2021	28/10
12	Human Interaction speeds	L+D	BB+LCD	1	11	25/10/2021	29/10
13	Business functions-Business definition and requirement analysis	L+D	BB+LCD	1	12	27/10/2021	4/11

14	Assignment 1: Quiz	Online	Google Form (MCQ)	0	12	28/10/2021	13/11
15	Continuation of requirement analysis	L+D	BB+LCD	1	13	29/10/2021	8/11
16	Basic business functions	L+D	BB+LCD	1	14	30/10/2021	8/11
17	Design standards.	L+D	BB+LCD	1	15	22/10/2021	9/11
18	Continuation of Design standards.	L+D	BB+LCD	1	16	4/11/2021	11/11
19	Tutorial	L+D	BB+LCD	0	16	8/11/2021	12/11
MODULE 3: System menus and navigation schemes							
20	System menus and navigation schemes	L+D	BB+LCD	1	17	10/11/2021	13/11
21	Structures of menus	L+D	BB+LCD	1	19	24/11/2021	17/11
22	Functions of menus	L+D	BB+LCD	1	19	25/11/2021	24/11
23	Contents of menus	L+D	BB+LCD	1	20	26/11/2021	25/11
24	Formatting of menus	L+D	BB+LCD	1	21	27/11/2021	26/11
25	Phrasing the menu	L+D	BB+LCD	1	22	29/11/2021	29/11
26	Selecting menu choices	L+D	BB+LCD	1	23	1/12/2021	1/12
27	Navigating menus, Kinds of graphical menus.	L+D	BB+LCD	1	24	2/12/2021	3/12
28	Assignment 2: Quiz	Online	Google Form (MCQ)	0	24	3/12/2021	11/12
29	Tutorial	L+D	BB+LCD	0	24	4/12/2021	8/12
MODULE-4: Windows							
30	Windows - Characteristics	L+D	BB+LCD	1	25	6/12/2021	9/12
31	Components of window	L+D	BB+LCD	1	26	8/12/2021	10/12
32	Window presentation styles	L+D	BB+LCD	1	27	9/12/2021	11/12
33	Types of windows	L+D	BB+LCD	1	28	10/12/2021	15/12
34	Window management,	L+D	BB+LCD	1	29	13/12/2021	16/12
35	Organizing window functions, Window operations.	L+D	BB+LCD	1	30	15/12/2021	17/12
36	Web systems,	L+D	BB+LCD	1	31	20/12/2021	23/12

37	Characteristics of device-based controls.	L+D	BB+LCD	1	32	22/12/2021	23/12
38	Tutorial	L+D	BB+LCD	0	32	23/12/2021 24/12/2021	31/12
MODULE 5: Screen Based Control							
39	Screen based controls	L+D	BB+LCD	1	33	27/12/2021	4/1
40	Operable control	L+D	BB+LCD	1	34	29/12/2021	6/1
41	Text control	L+D	BB+LCD	1	35	30/12/2021	7/1
42	Selection control	L+D	BB+LCD	1	36	31/12/2021	10/1
43	Custom control	L+D	BB+LCD	1	37	3/1/2022	11/1
44	Presentation control	L+D	BB+LCD	1	38	5/1/2022	17/1
45	Windows Tests-prototypes	L+D	BB+LCD	1	39	6/1/2022	17/1
46	Kinds of tests.	L+D	BB+LCD	1	40	7/1/2022	18/1
47	Assignment 3- Case Studies on user interface design	Offline	Report Submission	0	40	8/1/2022	17/1
48	Tutorial	L+D	BB+LCD	0	40	10/1/2022 12/1/2022	-
49	Revision	L+D	BB+LCD	0	40	13/1/2022	-
50	Revision	L+D	BB+LCD	0	40	17/1/2022	-
51	Revision	L+D	BB+LCD	0	40	19/1/2022	-


Total No. of Lecture Hours = 40


Total No. of Tutorial Hours = 07


Total No. of Revision Hours = 03

	Mode of Assignment and instructions	Date
Assignment 1	Quiz – Module 1 and Module 2 Note: Quiz will be conducted in online mode through google forms (MCQ).	28/10/2021

Assignment 2	Quiz – Module 2 and Module 3 Note: Quiz will be conducted in online mode through google forms (MCQ).	27/11/2021
Assignment 3	Case Studies on User interface design Note: Students are allowed to choose anyone of the topics listed <ul style="list-style-type: none"> • Tracking application • Educational application • Designing a VUI (Voice User Interface) • Eleven James website design • Soulance UI design • Developing the Zomato design system • College website(kssem.edu.in) • Menu driven interface • Command line interface • Graphical user interface • Form based interface • Touchscreen graphical user interface. • Form based interface • Natural language interface 	3/1/2022


Course In charge


Head of the Department
HOD
Dept. of Computer Science & Engineering
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Principal
Dr. K. RAMA NARASIMHA
Principal/Director
K S School of Engineering and Management
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K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BANGALORE - 560109

DEPARTMENT OF CIVIL ENGINEERING

SESSION: 2021-2022 (ODD SEMESTER)

LESSON PLAN

NAME OF THE STAFF : SAISUSHMA B A

COURSE CODE/TITLE : 18CV56/ HIGHWAY ENGINEERING

SEMESTER/YEAR : V/ III

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Delivery Date
MODULE 1- PRINCIPLES OF TRANSPORTATION ENGINEERING, HIGHWAY DEVELOPMENT AND PLANNING							
1	Importance of transportation, Different modes of transportation and comparison, Characteristics of road transport.	L+D	BB+LCD	1	1	01-10-2021	01/10/21
2	Jayakar committee recommendations, and Road implementation, Central Road Fund, Indian Roads Congress,	L+D	BB+LCD	1	2	01-10-2021	01/10/21
3	Central Road Research Institute, Road types and classification	L+D	BB+LCD	1	3	04-10-2021	04/10/21
4	Road patterns, planning surveys, master plan – saturation system of road planning, phasing road development in India	L+D	BB+LCD	1	4	08-10-2021	08/10/21

5	Problems on best alignment among alternate proposal, Present scenario of road development in India (NHDP & PMGSY)	L+D,PS	BB	1	5	08-10-2021	09 10 21
6	Salient Features of 3 rd and 4 th twenty year road development plans and Policies, Karnataka (KSHIP & KRDC) Road development plan - vision 2021.	L+D	BB+LCD	1	6	09-10-2021	11 10 21
7	Ideal Alignment, Factors affecting the alignment	L+D	BB+LCD	1	7	09-10-2021	18 10 21
8	Engineering surveys-Map study, Reconnaissance, Preliminary and Final location & detailed survey, Reports and drawings for new and re-aligned projects	L+D	BB+LCD	1	8	11-10-2021	18 10 21

MODULE 2: HIGHWAY ALIGNMENT AND SURVEYS AND HIGHWAY GEOMETRIC DESIGN

9	Cross sectional elements-width surface, camber, Sight distances-SSD	L+D	BB+LCD	1	9	18-10-2021	22 10 21
10	OSD ISD, HSD	L+D	BB+LCD	1	10	22-10-2021	22 10 21
11	Radius of curve, transition curve	L+D	BB+LCD	1	11	22-10-2021	25 10 21
12	Design of horizontal and vertical alignment- curves	L+D	BB+LCD	1	12	25-10-2021	29 10 21
13	super-elevation	L+D	BB+LCD	1	13	25-10-2021	08 11 21
14	Widening, gradients, summit and valley curves	L+D	BB+LCD	1	14	29-10-2021	12 11 21

15	Numerical on above	L+D, PS	BB	1	15	29-10-2021	13 11 21
16	ASSIGNMENT -01 (QUIZ)	L+D	LCD	1	14	08-11-2021	15 11 21
17	Numerical on above	L+D, PS	BB	1	16	15-11-2021	26 11 21
MODULE 3: PAVEMENT MATERIALS							
18	Subgrade soil- desirable properties, HRB soil classification	L+D	BB+LCD	1	17	19-11-2021	29 11 21
19	Determination of CBR and modulus of subgrade reaction, Numerical on above	L+D, PS	BB	1	18	19-11-2021	29 11 21
20	Numerical on above	L+D, PS	BB	1	19	26-11-2021	03 12 21
21	Numerical on above	L+D, PS	BB	1	20	26-11-2021	03 12 21
22	Aggregates- Desirable properties and tests, Bituminous materials- explanation on Tar, bitumen	L+D	BB+LCD	1	21	29-11-2021	04 12 21
23	Cutback and emulsion-tests on bituminous material	L+D	BB+LCD	1	22	03-12-2021	06 12 21
24	Pavement types, Component parts of flexible and rigid pavements and their functions, ESWL and its determination (Graphical method only)	L+D	BB+LCD	1	23	03-12-2021	09 12 21
25	Numerical on above	L+D, PS	BB	1	24	04-12-2021	10 12 21
26	Tutorials	L+D	BB	1	24	04-12-2021	17 12 21

MODULE 4: PAVEMENT CONSTRUCTION

27	Design of soil aggregate mixes by Rothfuch's method, Numerical on above	L+D, PS	BB	1	25	06-12-2021	17/12/21
28	Numerical on above	L+D, PS	BB	1	26	10-12-2021	20/12/21
29	ASSIGNMENT-02 (SEMINAR)	L+D, PS	BB+LCD	1	26	10-12-2021	24/12/21
30	Uses and properties of bituminous mixes and cement concrete in pavement construction	L+D	BB+LCD	1	27	13-12-2021	24/12/21
31	Earthwork; cutting and Filling, Preparation of subgrade	L+D	BB+LCD	1	28	20-12-2021	03/01/22
32	Specification and construction of Granular Sub base, BM, DBM	L+D,	BB+LCD	1	29	21-12-2021	04/01/22
33	WBM Base, WMM base,	L+D	BB+LCD	1	30	24-12-2021	05/01/22
34	Dry lean concrete base and PQC	L+D	BB+LCD	1	31	24-12-2021	05/01/22
35	Bituminous Concrete, Concrete roads, Concrete roads	L+D	BB+LCD	1	32	27-12-2021	06/01/22

MODULE 5: HIGHWAY DRAINAGE AND HIGHWAY ECONOMICS:

36	Significance and requirements, Surface drainage system and design	L+D	BB+LCD	1	33	31-12-2021	07/01/22
37	Sub surface drainage system, Numerical on above	L+D	BB+LCD	1	34	31-12-2021	10/01/22
38	Design of filter materials,	L+D, PS	BB	1	35	03-01-2022	11/01/22
39	Types of cross drainage structures, their choice and location	L+D, PS	BB	1	36	07-01-2022	12/01/22

40	Highway user benefits, VOC, Economic analysis - annual cost method	L+D	BB+LCD	1	37	07-01-2022	13/01/22
41	Benefit Cost Ratio method, NPV-IRR methods	L+D	BB+LCD	1	37	08-01-2022	17/01/22
42	Numerical on above	L+D, PS	BB	1	38	08-01-2022	18/01/22
43	Highway financing, BOT-BOOT concepts	L+D	BB+LCD	1	39	10-01-2022	18/01/22
44	ASSIGNMENT-03 (CASE STUDY)	L+D	BB+LCD	1	39	17-01-2022	19/01/22
45	Tutorials	L+D	BB	1	39	31-01-2022	20/01/22

Total no. of Lecture Hours= 40

Total no. of Tutorial Hours= 02

ASSIGNMENT DETAILS

	MODE OF ASSIGNMENT & INSTRUCTIONS	DATE
ASSIGNMENT- 01	Quiz on first internals portions for all the students. *It will be conducted through online mode in class.	08-11-2021

<p>ASSIGNMENT- 02</p>	<p>Seminar on</p> <ul style="list-style-type: none"> o IRC specifications of NH, SH, MDR, ODR & VR o IRC specifications of Bituminous materials (soil, aggregates, tar & bitumen) <p>*Students can make a group of 5 in a batch for conducting assignment 2</p> <p>*Select the topic on prior approval by the faculty in charge</p> <p>*Seminar should be Given on above mentioned date</p>	<p>10-12-2021</p>
<p>ASSIGNMENT- 03</p>	<p>A Case study on</p> <ul style="list-style-type: none"> o Accident Analysis o Highway alignment project o Setting out Radius of curvature o Setting out Transition curve o Earth work (cutting and filling) o Cross sectional elements of highway o Tests on Aggregates o Tests on Bitumen o Drainage system <p>*Assignment 3 will be conducted outside as a case study.</p> <p>* Students can make a group of 5 in a batch for conducting assignment 3.</p> <p>*Select the topic on prior approval by the faculty in charge.</p> <p>*Reports should be submitted on above mentioned date.</p>	<p>17-01-2022</p>

For Seminar - B.A
28/10/2021

Course In charge

W. Kelle
Head - Dept

Professor & Head
Dept. of Civil Engineering
K. S. Group of Institutions
K. S. School of Engineering & Management
Bengaluru - 560 109

I. S. Rane
Dr. K. PRANNA MARASIMHA
Principal/Director
K S School of Engineering and Management
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K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
SESSION: 2021-2022 (ODD SEMESTER)
LESSON PLAN

NAME OF THE STAFF : K. SENTHIL BABU
COURSE CODE/TITLE : 18EC52/ DIGITAL SIGNAL PROCESSING
SEMESTER/YEAR : V / III

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Execution Date
MODULE 1							
1	DFT -Sampling and reconstruction of the discrete time signal	L+D	BB	1	1	1/10/21	7/10/21
2	DFT as linear transformation	L+D+PS	BB	1	2	5/10/21	8/10/21
3	DFT Properties- Linearity, Periodicity	L+D+PS	BB	1	3	7/10/21	9/10/21
4	DFT Properties- Circular symmetry	L+D+PS	BB	1	4	8/10/21	11/10/21
5	DFT Properties- Circular time shift	L+D+PS	BB	1	5	9/10/21	12/10/21 13/10/21
6	DFT Properties- Circular frequency shift	L+D+PS	BB	1	6	12/10/21	21/10/21
7	DFT Properties- Circular folding	L+D+PS	BB	1	7	13/10/21	23/10/21
8	Circular Convolution, Multiplication in frequency	L+D+PS	BB	1	8	21/10/21	23/10/21
9	Correlation	L+D+PS	BB	1	9	22/10/21	26/10/21
10	2N point DFT using single N point DFT	L+D+PS	BB	1	10	23/10/21	27/10/21
	Additional Problems (Revision)					26/10/21	28/10/21

	Additional Problems (Revision)					27/10/21	28/10/21
MODULE 2							
11	Linear filtering of long data sequence: Overlap add method	L+D	BB	1	11	28/10/21	29/10/21
12	Linear filtering of long data sequence : Overlap save method	L+D	BB	1	12	29/10/21	31/10/21
13	Problems on Linear filtering Techniques	L+D+PS	BB	1	13	2/11/21	4/11/21
Assignment 1							
14	Efficient computation of the DFT (FFT algorithms).	L+D+PS	BB	1	14	4/11/21	10/11/21
15	Radix-2 FFT algorithm DIT	L+D	BB	1	15	9/11/21	11/11/21
16	DIT- FFT Problems	L+D+PS	BB	1	16	10/11/21	12/11/21
17	Radix-2 FFT algorithm DIF	L+D	BB	1	17	16/11/21	16/11/21
18	DIF- FFT Problems	L+D+PS	BB	1	18	17/11/21	17/11/21
19	DIT/DIF - FFT Problems (convolution)	L+D+PS	BB	1	19	18/11/21	23/11/21
20	DIT/DIF - FFT Problems (convolution)	L+D+PS	BB	1	20	19/11/21	24/11/21
MODULE 4							
21	IIR Filter Design: Infinite Impulse response Filter Format.	L+D	BB	1	21	23/11/21	26/11/21
22	Bilinear Transformation Design Method,	L+D	BB	1	22	24/11/21	30/11/21
23	Analog Filters using Lowpass prototype transformation,	L+D	BB	1	23	25/11/21	1/12/21
24	Analog Filter Design	L+D+PS	BB	1	24	26/11/21	2/12/21
25	Normalized Butterworth Functions, Bilinear Transformation and Frequency Warping.	L+D+PS	BB	1	25	27/11/21	3/12/21
26	Bilinear Transformation Design Procedure	L+D+PS	BB	1	26	30/11/21	2/12/21

11/11/21

27	Digital Butterworth Filter Design using BLT.	L+D+PS	BB	1	27	1/12/21	8/12/21
28	Digital Butterworth Filter Design using BLT.	L+D+PS	BB	1	28	2/12/21	9/12/21
29	Realization of IIR Filters in Direct form I and II.	L+D+PS	BB	1	29	3/12/21	10/12/21
30	Realization of IIR Filters in Direct form I and II.	L+D+PS	BB	1	30	4/12/21	11/12/21
	Additional Problems (Revision)					7/12/21	14/12/21
	Additional Problems(Revision)					8/12/21	15/12/21
	Assignment 2						
MODULE 3							
31	Structure for FIR Systems: Direct form,	L+D+PS	BB	1	31	9/12/21	12/12/21
32	DF-II structure	L+D+PS	BB	1	32	10/12/21	13/12/21
33	Cascade structure	L+D+PS	BB	1	33	14/12/21	21/12/21
34	DF to Lattice Structure- problems	L+D+PS	BB	1	34	15/12/21	22/12/21
35	Lattice Structure to DF- problems	L+D+PS	BB	1	35	21/12/21	23/12/21
36	Characteristics of practical frequency -selective filters,	L+D+PS	BB	1	36	22/12/21	24/12/21
37	Symmetric and Antisymmetric FIR filters,	L+D	BB	1	37	23/12/21	31/12/21
38	Design of Linear-phase FIR filters using windows	L+D+PS	BB	1	38	24/12/21	4/1/22
39	Rectangular, Hamming, Hanning, Bartlett windows.	L+D+PS	BB	1	39	28/12/21	5/1/22
40	Design of FIR filters using frequency sampling method.	L+D+PS	BB	1	40	29/12/21	6/1/22
	Additional Problems(Revision)					30/12/21	7/1/22
MODULE 5							
41	Digital Signal Processors: DSP Architecture,	L+D	BB	1	41	31/12/21	8/1/22
42	DSP Hardware Units	L+D	BB	1	42	4/1/22	8/1/22

43	Fixed point format	L+D	BB	1	43	5/1/22	11/1/22
44	Fixed point format	L+D+PS	BB	1	44	6/1/22	12/1/22
45	Floating point Format	L+D+PS	BB	1	45	7/1/22	12/1/22
46	IEEE Floating point formats	L+D+PS	BB	1	46	8/1/22	13/1/22
47	Fixed point digital signal processors,	L+D	BB	1	47	11/1/22	18/1/22
48	Floating point processors	L+D	BB	1	48	12/1/22	19/1/22
49	FIR and IIR filter implementations in Fixed point systems	L+D+PS	BB	1	49	13/1/22	20/1/22
50	FIR and IIR filter implementations in Fixed point systems	L+D+PS	BB	1	50	18/1/22	21/1/22
	Additional Problems (Revision)					19/1/22	21/1/22
	Assignment 3						

Total No. of Lecture Hours and Tutorials = 50

Total No. of Revision Hours = 06

	Mode of Assignment and Instructions*	Date
Assignment 1	Assignment Questions and Activity (chart)	8/11/21
Assignment 2	Assignment Questions	13/11/21
Assignment 3	Assignment Questions and Activity (using MATLAB)	17/11/21


Course In charge


Head ECE


Principal
Principal/Director
K.S. School of Engineering & Management
Bangalore-560 062

**KSSEM****K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109****DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING****SESSION: 2021-2022 (ODD SEMESTER)****LESSON PLAN**

NAME OF THE STAFF : HEMAPRIYA M
COURSE CODE/TITLE : 18EE54 / SIGNALS AND SYSTEMS
SEMESTER/YEAR : V / III

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Execution Date
MODULE 1							
1	Introduction: Definitions of signals and a system	L+D	BB	1	1	5-10-2021	5-10-21
2	Classification of signals	L+D,PS	BB	1	2	7-10-2021	12-10-21
3	Classification of signals	L+D,PS	BB	1	3	12-10-2021	26-10-21
4	Basic operations on signals.	L+D,PS	BB	1	4	13-10-2021	27-10-21
5	Basic operations on signals.	L+D,PS	BB	1	5	21-10-2021	28-10-21
6	Elementary signals viewed as interconnections of operations	L+D,PS	BB	1	6	23-10-2021	02-11-21
7	Elementary signals viewed as interconnections of operations	L+D,PS	BB	1	7	26-10-2021	09-11-21
8	Properties of system	L+D,PS	BB	1	8	27-10-2021	10-11-21
MODULE 2							
9	Time - Domain Representations for LTI Systems: Convolution	L+D,PS	BB	1	9	28-10-2021	11-11-21
10	Impulse response and properties	L+D,PS	BB	1	10	2-11-2021	12-11-21
11	Impulse response and properties	L+D,PS	BB	1	11	4-11-2021	15-11-21
12	Solution of differential and difference equations	L+D,PS	BB	1	12	9-11-2021	16-11-21
13	Assignment 1	QUIZ	OHP	0	11	10-11-2021	17-11-21

14	Solution of differential and difference equations	L+D,PS	BB	1	13	16-11-2021	23-11-21
15	Solution of differential and difference equations	L+D,PS	BB	1	14	17-11-2021	25-11-21
16	Block diagram representation	L+D,PS	BB	1	15	18-11-2021	30-11-21
17	Block diagram representation	L+D,PS	BB	1	16	23-11-2021	01-12-21
MODULE 3							02-12-21
18	The Continuous-Time Fourier Transform: Representation of a non-periodic signals	L+D,PS	BB	1	17	24-11-2021	4-12-21
19	Continuous-time Fourier transform (FT)	L+D,PS	BB	1	18	25-11-2021	7-12-21
20	Continuous-time Fourier transform (FT)	L+D,PS	BB	1	19	30-11-2021	8-12-21
21	Properties of continuous-time Fourier transform	L+D,PS	BB	1	20	1-12-2021	9-12-21
22	Properties of continuous-time Fourier transform	L+D,PS	BB	1	21	2-12-2021	12-12-21
23	Applications	L+D,PS	BB	1	22	7-12-2021	14-12-21
24	Frequency response of LTI systems	L+D,PS	BB	1	23	8-12-2021	15-12-21
25	Solutions of differential equations	L+D,PS	BB	1	24	9-12-2021	16-12-21
26	Assignment 2	Seminar	LCD	0	24	14-12-2021	17-12-21
MODULE 4							
27	The Discrete-Time Fourier Transform: Representations of non-periodic signals	L+D,PS	BB	1	25	15-12-2021	20-12-21
28	The discrete-time Fourier transform (DTFT),	L+D,PS	BB	1	26	21-12-2021	21-12-21
29	Properties of DTFT and applications	L+D,PS	BB	1	27	22-12-2021	23-12-21
30	Properties of DTFT and applications	L+D,PS	BB	1	28	23-12-2021	24-12-21
31	Frequency response of LTI system	L+D,PS	BB	1	29	28-12-2021	30-12-21
32	Frequency response of LTI system	L+D,PS	BB	1	30	29-12-2021	31-12-21
33	Solutions of difference equations	L+D,PS	BB	1	31	30-12-2021	3-1-22
34	Solutions of difference equations	L+D,PS	BB	1	32	4-01-2022	4-1-22

MODULE 5

35	Z- Transforms: Introduction, Z-transform	L+D,PS	BB	1	33	5-01-2022	6-1-22
36	Properties of ROC	L+D,PS	BB	1	34	6-01-2022	10-1-22
37	Properties of Z-transforms	L+D,PS	BB	1	35	7-01-2022	11-1-22
38	Inversion of Z-transform methods - power series and partial expansion	L+D,PS	BB	1	36	8-01-2022	12-1-22
39	Transforms analysis of LTI systems	L+D,PS	BB	1	37	11-01-2022	17-1-22
40	Transfer function, stability and causality	L+D,PS	BB	1	38	12-01-2022	19-1-22
41	Unilateral Z-transform and its application to solve difference equations	L+D,PS	BB	1	39	13-01-2022	20-1-22
42	Assignment 3	Flip Class	LCD	0	38	18-01-2022	28-1-22
43	Unilateral Z-transform and its application to solve difference equations	L+D,PS	BB	1	40	19-01-2022	29-1-22

Total No. of Lecture Hours = 40

Total No. of Tutorial (Assignment) Hours = 3

Total No. of Revision Hours = 0

	Mode of Assignment and Instructions	Date
Assignment 1	Quiz: First Internal Assessment Syllabus	10-11-2021
Assignment 2	Seminar: Second Internal Assessment Syllabus	14-12-2021
Assignment 3	Flip Class: Third Internal Assessment Syllabus	18-01-2022

P. Siva
Course In charge

M. S. ...
Head of the Department

K. Ramesh
Principal



K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF MANAGEMENT STUDIES
SESSION: 2021-2022 (ODD SEMESTER)
LESSON PLAN

NAME OF THE STAFF : PROF. ROOPA BALAVENU

COURSE CODE/TITLE : 20MBA301 / EMERGING EXPONENTIAL TECHNOLOGIES

SEMESTER/YEAR : III SEMESTER / 2 YEAR

ACADEMIC YEAR : 2021-2022

Sl. No	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Execution Date
MODULE 1							
1	Module I: Introduction to Emerging Technologies Evolution of technologies;	L+D	WB+LCD	1	1	08-Nov-21	8/11/21
2	Introduction to Industrial revolution;	L+D	WB+LCD	1	2	09-Nov-21	9/11/21
3	Historical background of the Industrial Revolution;	L+D	WB+LCD	1	3	10-Nov-21	10/11/21
4	Introduction to Fourth industrial revolution (IR 4.0);	L+D	WB+LCD	1	4	11-Nov-21	11/11/21
5	Role of data for Emerging technologies;	L+D	WB+LCD	1	5	12-Nov-21	12/11/21
6	Enabling devices and networks for emerging technologies (programmable devices);	L+D	WB+LCD	1	6	15-Nov-21	15/11/21
7	Human to Machine Interaction;	L+D	WB+LCD	1	7	16-Nov-21	16/11/21
8	Future trends in emerging technologies.	L+D	WB+LCD	1	8	17-Nov-21	17/11/21
9	Future trends in emerging technologies.	L+D	WB+LCD	1	9	18-Nov-21	18/11/21
MODULE 2							
10	Module II : Data Science Overview for Data Science;	L+D	WB+LCD	1	10	19-Nov-21	19/11/21
11	Definition of data and information;	L+D	WB+LCD	1	11	23-Nov-21	23/11/21

12	Data types and representation;	L+D	WB+LCD	1	12	24-Nov-21	24/11/21
13	Data Value Chain;	L+D	WB+LCD	1	13	25-Nov-21	25/11/21
14	Data Acquisition;	L+D	WB+LCD	1	14	26-Nov-21	26/11/21
15	Data Analysis; Data Curating; Data Storage;	L+D	WB+LCD	1	15	29-Nov-21	29/11/21
16	Data Usage; Basic concepts of Big Data	L+D	WB+LCD	1	16	30-Nov-21	30/11/21

MODULE 3

17	Module III: Artificial Intelligence(AI) Concept of AI, meaning of AI,	L+D	WB+LCD	1	17	01-Dec-21	1/12/21
18	History of AI,	L+D	WB+LCD	1	18	02-Dec-21	2/12/21
19	Levels of AI,	L+D	WB+LCD	1	19	03-Dec-21	3/12/21
20	Types of AI,	L+D	WB+LCD	1	20	06-Dec-21	7/12/21
21	Applications of AI in Agriculture, Health,	L+D	WB+LCD	1	21	07-Dec-21	7/12/21
22	Applications of AI in Business (Emerging market), Education, AI tools and platforms (eg: scratch/object tracking)	L+D	WB+LCD	1	22	08-Dec-21	8/12/21
23	Applications of AI in Education,	L+D	WB+LCD	1	23	09-Dec-21	9/12/21
24	AI tools and platforms (eg: scratch/object tracking)	L+D	WB+LCD	1	24	10-Dec-21	10/12/21
25	AI tools and platforms (eg: scratch/object tracking)	L+D	WB+LCD	1	25	13-Dec-21	14/12/21

MODULE 4

26	Unit IV : Internet of Things (IOT) Overview of IOT; meaning of IOT;	L+D	WB+LCD	1	26	14-Dec-21	15/12/21
27	History of IOT;	L+D	WB+LCD	1	27	15-Dec-21	17/12/21
28	Advantages of IOT;	L+D	WB+LCD	1	28	16-Dec-21	23/12/21
29	Challenges of IOT;	L+D	WB+LCD	1	29	17-Dec-21	23/12/21
30	IOT working process; Architecture of IOT;	L+D	WB+LCD	1	30	23-Dec-21	24/12/21
31	Devices and network; Applications of IOT at Smart home;	L+D	WB+LCD	1	31	24-Dec-21	24/12/21
32	Smart grid; Smart city;	L+D	WB+LCD	1	32	27-Dec-21	27/12/21
33	Wearable devices; Smart farming; IOT tools and platforms;	L+D	WB+LCD	1	33	28-Dec-21	28/12/21

34	Sample application with hands on activity Market Indicators. (Theory only)	L+D	WB+LCD	1	34	29-Dec-21	29/12/21
MODULE 5							
35	Unit V :Augmented Reality and Virtual Reality Introduction to AR,	L+D	WB+LCD	1	35	30-Dec-21	30/12/21
36	Introduction to Virtual reality (VR),	L+D	WB+LCD	1	36	31-Dec-21	31/12/21
37	Augmented Reality (AR) vs mixed reality (MR),	L+D	WB+LCD	1	37	03-Jan-22	31/1/22
38	Architecture of AR systems.	L+D	WB+LCD	1	38	04-Jan-22	
39	Application of AR systems (education, medical, assistance, entertainment) workshop oriented hands demo	L+D	WB+LCD	1	39	05-Jan-22	
40	Application of AR systems (education, medical, assistance, entertainment) workshop oriented hands demo	L+D	WB+LCD	1	40	06-Jan-22	
41	Application of AR systems (education, medical, assistance, entertainment) workshop oriented hands demo	L+D	WB+LCD	1	41	07-Jan-22	
42	Application of AR systems (education, medical, assistance, entertainment) workshop oriented hands demo	L+D	WB+LCD	1	42	10-Jan-22	
43	Application of AR systems (education, medical, assistance, entertainment) workshop oriented hands demo	L+D	WB+LCD	1	43	11-Jan-22	
MODULE-6							
44	Unit VI : Ethics, Professionalism and Other Emerging Technologies Technology and ethics,	L+D	WB+LCD	1	44	12-Jan-22	
45	Digital privacy, Accountability and trust,	L+D	WB+LCD	1	45	13-Jan-22	
46	Treats and challenges.	L+D	WB+LCD	1	46	17-Jan-22	
47	Other Technologies: Block chain technology,	L+D	WB+LCD	1	47	18-Jan-22	
48	Cloud and quantum computing,	L+D	WB+LCD	1	48	19-Jan-22	

49	Autonomic computing.	L+D	WB+LCD	1	49	24-Jan-22	
50	Computer vision, Cyber security, Additive manufacturing (3D Printing).	L+D	WB+LCD	1	50	25-Jan-22	
51	Revision Hours	L+D	WB+LCD	1	51	27-Jan-22	
52	Revision Hours	L+D	WB+LCD	1	52	28-Jan-22	

Total No. of Lecture Hours = 50

Total No. of Tutorial Hours = 06

Total No. of Practical Hours = 04

Total No. of Revision Hours = 02

	Mode of Assignment and instructions	Date
Assignment 1	Business plan and Technologies used Presentation	18/12/2021
Assignment 2	Apps Presentation	20/01/2022
Assignment 3	Quiz	20/02/2022



Course In charge



Head of the Department-MBA



Principal/ Director



K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109

DEPARTMENT OF MECHANICAL ENGINEERING

NAME OF THE STAFF : VINOD A
 COURSE CODE/TITLE : 18ME751/ ENERGY AND ENVIRONMENT
 SEMESTER/YEAR : 7th sem / IV year
 ACADEMIC YEAR : 2021-2022

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Hours	Cumulative No. of Periods	Proposed Date	Engaged Date
MODULE 1							
1.	Energy and power, forms of energy.	L+D	BB+LCD	1	1	1/10/21	2/10/21
2.	Primary energy sources, energy flows.	L+D	BB+LCD	1	2	4/10/21	9/10/21
3.	World energy production and consumption.	L+AV	LCD	1	3	7/10/21	11/10/21
4.	Revision and Discussion	L+D	BB	T	3	9/10/21	21/10/21
5.	Key energy trends in India: Demand, Electricity, and Access to modern energy.	L+AV	LCD	1	4	11/10/21	22/10/21
6.	Energy production and trade.	L+D	BB+LCD	1	5	18/10/21	25/10/21
7.	Factors affecting India's energy development: Economy and demographics Policies.	L+AV	BB+LCD	1	6	21/10/21	28/10/21
8.	Institutional framework.	L+D	BB	T	6	22/10/21	29/10/21
9.	Energy prices and affordability.	L+D	BB	1	7	25/10/21	8/11/21
10.	Social and environmental aspects, Investment.	L+D	BB	1	8	28/10/21	11/11/21
MODULE 2							
11.	Energy storage systems: Thermal energy storage methods.	L+D	BB+LCD	1	9	29/10/21	12/11/21
12.	Energy saving, Thermal energy storage systems.	L+D	BB+LCD	1	10	30/10/21	13/11/21
13.	Energy demand estimation, Energy pricing	L+D	BB	1	11	4/11/21	26/11/21
14.	Revision and Discussion	L+D	BB	T	11	8/11/21	29/11/21
15.	Energy Audit: Purpose, Methodology with respect to process Industries.	L+D PS	BB	1	12	15/11/21	2/12/21
16.	Energy Management: Principles of Energy Management.	L+D	BB	1	13	18/11/21	2/12/21
17.	Characteristic method employed in Certain Energy Intensive Industries.	L+D	BB	1	14	19/11/21	3/12/21, 4/12/21
18.	Problems	PS	BB	T	14	25/11/21	4/12/21, 6/12/21
19.	Economic Analysis: Scope, Characterization of an Investment Project.	L+D	BB	1	15	26/11/21	

MODULE 3

20.	Environment: Introduction, Multidisciplinary nature of environmental studies- scope and importance.	L+ D	BB+LCD	1	16	27/11/21	9/12/21
21.	Need for public awareness.	L+ D	BB+LCD	1	17	29/11/21	13/12/21
22.	Ecosystem: Concept, Energy flow.	L+D	BB+LCD	1	18	2/12/21	16/12/21
23.	Discussion	L+D	BB	T	18	3/12/21	17/12/21
24.	Structure and function of an ecosystem.	L+ D	LCD	1	19	4/12/21	23/12/21
25.	Food chains, food webs and ecological pyramids.	L+AV	LCD	1	20	6/12/21	23/12/21
26.	Forest ecosystem, Grassland ecosystem.	L+AV	BB+LCD	1	21	9/12/21	23/12/21
27.	Revision and Group Discussion	L+ LCD	BB+LCD	T	21	10/12/21	24/12/21
28.	Desert ecosystem and Aquatic ecosystems.	L+ D	BB+LCD	1	22	13/12/21	30/12/21
29.	Ecological succession.	L+D	BB	1	23	13/12/21	30/12/21

MODULE 4

30.	Environmental Pollution: Definition, Cause, effects	L+D	BB	1	24	20/12/21	31/1/22
31.	control measures of - Air pollution, Water pollution	L+ D	BB+LCD	1	25	20/12/21	6/1/12
32.	Soil pollution, Marine pollution, Noise pollution.	L+AV	BB+LCD	1	26	23/12/21	6/1/12
33.	Seminar and Discussion	L+D	BB+LCD	T	26	24/12/21	7/1/12
34.	Thermal pollution and Nuclear hazards.	L+AV	BB+LCD	1	27	24/12/21	8/1/12
35.	Solid waste Management.	L+AV	BB+LCD	1	28	27/12/21	8/1/12
36.	Disaster management.	L+AV	BB+LCD	1	29	27/12/21	10/1/12
37.	Discussion & Flipped Class	L+AV	BB+LCD	T	29	30/12/21	12/1/12
38.	Role of an individual in prevention of pollution.	L+D	BB	1	30	31/12/21	15/1/22
39.	Pollution case studies.	L+ D	BB+LCD	1	31	31/12/21	12/1/22

MODULE 5

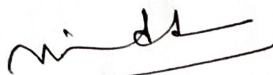
40.	Social Issues and the Environment: Climate change.	L+D	BB+LCD	1	32	3/1/22	20/1/22
41.	Global warming and acid rain.	L+ AV	BB+LCD	1	33	3/1/22	21/1/22
42.	Ozone layer depletion, nuclear accidents and holocaust.	L+ D	BB+LCD	1	34	3/1/22	24/1/22
43.	Discussion & Flipped Class	L+ D	BB	T	34	3/1/22	28/1/22
44.	Case Studies on Social Issues.	L+ D	BB+LCD	1	35	6/1/22	29/1/22
45.	Wasteland reclamation.	L+D	BB+LCD	1	36	6/1/22	31/1/22
46.	Consumerism and waste products.	L+ D	BB+LCD	1	37	7/1/22	3/2/22
47.	Revision and Discussion	L+ D	BB	T		7/1/22	7/2/22

48.	Environment Protection Act, Air (Prevention and Control of Pollution) Act.	L+D	BB+LCD	1	38	8/1/22	5/2/22
49.	Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act	L+D	BB+LCD	1	39	8/1/22	5/2/22
50.	Issues involved in enforcement of environmental Legislation.	L+D	BB+LCD	1	40	17/1/22	5/2/22
51.	Discussion & Flipped Class	L+D	BB	T	40	17/1/22	


Total No. of Lecture Hours = 40

Total No. of Tutorial Hours = 10

	Mode of Assignment and instructions*	Date
Assignment 1	Question & Answer	25/10/21
Assignment 2	Flip classes, Video presentation	27/11/21
Assignment 3	Flip classes, Case studies	20/12/21


Course In charge


Head of the Department


Dr. K. Rama Narasimha
Principal
K S School of Engineering
Bengaluru

*Quiz, Seminar, Case studies, Mini project, Open book test, Model making, Drawing, Role play, Street play, Video presentation, Flip classes, any other activities.