



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

SESSION: 2021-2022 (EVEN SEMESTER)

LESSON PLAN

NAME OF THE STAFF : DIVYA R

COURSE CODE/TITLE : 18MAT41/ COMPLEX ANALYSIS, PROBABILITY AND STATISTICAL METHODS

SEMESTER/YEAR : IV / II-CV & ME

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	Review of function of a complex variable, limits, continuity, and differentiability.	L+D,PS	Blackboard	1	1	23-05-2022	23/5/22
2	Analytic functions: Cauchy-Riemann equations in Cartesian and Polar forms	L+D,PS	Blackboard	2	3	24-05-2022 25-05-2022	24/5/22 26/5/22
3	Problem Solving (Tutorial)	L+D,PS	BB	0	3	26-05-2022	27/5/22
4	Construction of analytic functions: Milne-Thomson method-Problems.	L+D,PS	BB	2	5	27-05-2022 28-05-2022	6/6/22 7/6/22
5	Problem Solving (Tutorial)	L+D,PS	BB	0	5	30-05-2022	8/6/22
6	Construction of analytic functions: Milne-Thomson method-Problems.	L+D,PS	BB	3	8	31-05-2022 01-06-2022 02-06-2022	9/6/22 13/6/22 14/6/22
7	REVISION	L+D,PS	BB	0	8	03-06-2022	15/6/22
MODULE 2							
8	Introduction. Discussion of transformations: $w = z^2, w = e^z, w = z + \frac{1}{z}, z \neq 0$.	L+D,PS	BB	3	11	06-06-2022 07-06-2022 08-06-2022	16/6/22 17/6/22 27/6/22
9	Bilinear transformations- Problems	L+D,PS	BB	2	13	09-06-2022 10-06-2022	28/6/22 28/6/22
10	Problem Solving (Tutorial)	L+D,PS	BB	0	13	13-06-2022	29/6/22
11	Complex integration: Line integral of a complex function- Cauchy's theorem and Cauchy's integral formula and problems	L+D,PS	BB	3	16	14-06-2022 15-06-2022	30/6/22 1/7/22

12	Problem Solving (Tutorial)	L+D,PS	BB	0	16	16-06-2022	8/7/22
13	REVISION	L+D,PS	BB	0	16	17-06-2022	9/7/22, 11/7/22
MODULE 3							
14	Probability Distributions: Review of basic probability theory. Random variables (discrete and continuous),	L+D,PS	BB	2	18	23-06-2022	14/7/22
15	Problem Solving (Tutorial)	L+D,PS	BB	0	18	25-06-2022	15/7/22
16	Binomial distributions- problems	L+D,PS	BB	2	20	27-06-2022	16/7/22
17	Poisson distributions- problems	L+D,PS	BB	1	21	04-07-2022	18/7/22
18	Problem Solving (Tutorial)	L+D,PS	BB	0	21	05-07-2022	19/7/22
19	Exponential distributions- problems	L+D,PS	BB	1	22	06-07-2022	20/7/22
20	Normal distributions- problems	L+D,PS	BB	2	24	07-07-2022	21/7/22
21	REVISION	L+D,PS	BB	0	24	08-07-2022	22/7/22
MODULE 4							
22	Statistical Methods: Correlation and regression-Karl Pearson's coefficient of correlation and rank correlation-problems	L+D,PS	BB	3	27	09-07-2022	24/7/22
23	Regression analysis- lines of regression -problems.	L+D,PS	BB	2	29	13-07-2022	29/7/22
24	Problem Solving (Tutorial)	L+D,PS	BB	0	29	14-07-2022	30/7/22
25	Curve Fitting: Curve fitting by the method of least squares-fitting the curves of the form $y = ax + b$, $y = ax^2 + bx + c$, $y = ax^b$	L+D,PS	BB	3	32	15-07-2022	1/8/22
26	Problem Solving (Tutorial)	L+D,PS	BB	0	32	16-07-2022	2/8/22
27	REVISION	L+D,PS	BB	0	32	18-07-2022	3/8/22
MODULE 5							
28	Joint probability distribution: Joint Probability distribution for two discrete random variables, expectation and covariance	L+D,PS	BB	2	34	19-07-2022	4/8/22
29	Problem Solving (Tutorial)	L+D,PS	BB	0	34	01-08-2022	5/8/22
30	Sampling Theory: Introduction to sampling distributions, standard error, Type-I and Type-II errors. Test of hypothesis for means	L+D,PS	BB	3	37	02-08-2022	18/8/22
31	Student's t-distribution, Chi square distribution as a test of goodness of fit	L+D,PS	BB	3	40	03-08-2022	19/8/22
						08-08-2022	
						10-08-2022	20/8/22
						11-08-2022	22/8/22
						12-08-2022	

32	Problem Solving (Tutorial)	L+D.PS	BB	0	40	13-08-2022	25/8/22
33	REVISION	L+D.PS	BB	0	40	16-08-2022 17-08-2022	26/8/22
34	REVISION	L+D.PS	BB	0	40	18-08-2022 19-08-2022	29/8/22
35	REVISION	L+D.PS	BB	0	40	22-08-2022 23-08-2022	30/8/22
36	REVISION	L+D.PS		0	40	24-08-2022 02-09-2022	
37	REVISION	L+D.PS		0	40	03-09-2022	

Total No. of Lecture Hours = 40

Total No. of Tutorial Hours = 10

Total No. of Revision Hours = 09

W. Vasudeva
Course in charge

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

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SESSION:2021-2022(EVEN SEMESTER)

KSSEM

LESSON PLAN

NAME OF THE STAFF : Mrs.AMITHA S

SUBJECT CODE/NAME : 18CS645/ System Modelling & Simulation

SEMESTER/SEC/YEAR : VI/ A/III

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Engaged Date
MODULE 1: Introduction							
1	Introduction: When simulation is the appropriate tool and when it is not appropriate, Advantages and disadvantages of Simulation, Areas of application	L+D	BB+LCD	1	1	4/04/2022	05/4/22
2	Systems and system environment, Components of a system, Discrete and continuous systems, Model of a system, Types of Models, Discrete-Event System	L+ D	BB+LCD	1	2	5/04/2022	07/4/22
3	Simulation examples: Simulation of queuing systems. Single Chanel Queue	PS+L+D	BB+LCD	1	3	6/04/2022	13/4/22
4	Simulation examples: Simulation of queuing systems. Double Chanel queue	PS+L+D	BB+LCD	1	4	6/04/2022	19/4/22
5	Simulation examples: Simulation of news paper problem	PS+L+D	BB+LCD	1	5	11/04/2022	20/4/22
6	Simulation examples: Simulation of	PS+L+D	BB+LCD	1	6	12/04/2022	21/4/22

21	Poisson Distribution, Acceptance-Rejection technique	L+D	BB	1	16	07/05/2022	25/5/22
22	Revision on Inverse Transformation technique	L+D	BB	1	16	07/05/2022	25/5/22
23	Revision on Acceptance-Rejection technique	PS+L+D	BB	-	16	09/05/2022	30/6/22
24	Tutorial (Problem Solving on Acceptance-Rejection)	PS+L+D	BB	-	16	10/05/2022	31/5/22

MODULE 4: Input Modeling

25	Input Modeling: Data Collection, Identifying the distribution with data, Parameter estimation.	L+D	BB	1	17	11/05/2022	1/6/22
26	Goodness of Fit Tests	L+D	BB	1	18	11/05/2022	1/6/22
27	Fitting a non-stationary Poisson process	L+D	BB	1	19	16/05/2022	13/6/22
28	Problem Solving-Goodness of fit	PS+L+D	BB	1	20	17/05/2022	13/6/22
29	Selecting input models without data	L+D	BB	1	21	18/05/2022	13/6/22
30	Multivariate and Time-Series input model Estimation of Absolute Performance	L+D	BB	1	22	18/05/2022	14/6/22
31	Types of simulations with respect to output analysis Stochastic nature of output data	L+D	BB	1	23	23/05/2022	14/6/22
32	Measures of performance and their estimation	PS+L+D	BB	1	24	24/05/2022	14/6/22
	Assignment 2 Written Assignment	Offline	Assignment Book	-	24	24/05/2022	15/6/22
33	Revision on Chi square test	L+D	BB	-	24	25/05/2022	15/6/22
34	Revision on Poisson process	L+D	BB	-	24	25/05/2022	18/6/22
35	Revision on K-S test	L+D	BB	-	24	28/05/2022	28/6/22

36	Tutorials Problem Solving on Goodness and fit	PS+L+D	BB	-	24	28/05/2022	15/6/22	
MODULE 2: Statistical Models in Simulation								
37	Statistical Models in Simulation: Review of terminology and concepts, Useful statistical models,.	L+D	BB	1	25	30/05/2022	28/6/22	
38	Continuous distributions, Empirical distributions	L+D	BB	1	26	31/05/2022	28/6/22	
39	Discrete distributions, Poisson process	L+D	BB	1	27	06/06/2022	29/6/22	
40	Queuing Models: Characteristics of queuing systems	L+D	BB	1	28	07/06/2022	29/6/22	
41	Queuing notation, Long-run measures of performance of queuing systems	L+D	BB	1	29	08/06/2022	29/6/22	
42	Long-run measures of performance of queuing systems	L+D	BB	1	30	13/06/2022	04/7/22	
43	Steady-state behavior of M/G/1 queue	L+D	BB	1	31	14/06/2022	04/7/22	
44	Steady-state behavior of M/G/Infinity queue	L+D	BB	1	32	15/06/2022	04/7/22	
45	Revision on Statistical Modelling	L+D	BB	-	32	15/06/2022	05/7/22	
46	Revision on Continuous Distribution	L+D	BB	-	32	20/06/2022	05/7/22	
47	Revision on Poisson Distribution	L+D	BB	-	32	21/06/2022	05/7/22	
48	Revision on performance	L+D	BB	-	32	22/06/2022	06/7/22	
MODULE 5: Output Analysis								
49	Point estimation ,confidence interval estimation	L+D	BB	1	34	25/06/2022	06/7/22	
50	Output analysis for terminating simulations	L+D	BB	1	35	25/06/2022	06/7/22	
51	Output analysis for steady state simulations-initialization bias, error	L+D	BB	1	36	27/06/2022	11/7/22	

	estimation								
	Assignment 3: Written Assignment	Offline	Assignment Book	1		37	27/06/2022		
52	Replication method , quantiles	L+D	BB	1		38	28/06/2022	12/7/22	
53	Verification, Calibration And Validation: Optimization: Model building, verification and validation	L+D	BB	-		38	29/06/2022	12/7/22	
54	Verification of simulation models	L+D	BB	1		39	29/06/2022	12/7/22	
55	Calibration and validation of models	L+D	BB	1		40	29/06/2022	13/7/22	
56	Revision	L+D	BB	-		40	09/07/2022	13/7/22	
57	Revision	L+D	BB	-		40	11/07/2022	13/7/22	
58	Revision	L+D	BB	-		40	12/07/2022	13/7/22	
59	Revision	L+D	BB	-		40	13/07/2022	13/7/22	
60	Revision	L+D	BB	-		40	13/07/2022	13/7/22	

Total No. of Lecture Hours = 40


Total No. of Tutorial Hours(Problem Solving) = 03

Total No. of Revision Hours = 17

Mode of Assignment and instructions		Date
Assignment 1	<p>Written Assignment -Module 1 and Module 2</p> <ul style="list-style-type: none"> Simulation of Queuing System Event Scheduling Time Advance Algorithm Random Number Generation <p>Note : students need to answer Assignment -1 for 15 marks and should submit assignment on or before submission date.</p>	27/04/2022

Assignment 2	Written Assignment -Module 2 and Module 3 <ul style="list-style-type: none"> • Test for Random Numbers • Inverse transformation Technique • Goodness of fit test Note : students need to answer Assignment -2 for 15 marks and should submit assignment on or before submission date.	24/05/2022
Assignment 3	Written Assignment – Module 4 and Module 5 <ul style="list-style-type: none"> • Statistical Models in Simulations • Output Analysis for steady state simulation • Verification of Simulation Models Note : students need to answer Assignment -3 for 20 marks and should submit assignment on or before submission date.	27/06/2022


 Course In charge


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KSSEM
KARNATAKA STATE ENGINEERING
MANAGEMENT UNIVERSITY

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

DEPARTMENT OF CIVIL ENGINEERING

SESSION: 2021-2022 (EVEN SEMESTER)

LESSON PLAN

NAME OF THE STAFF : AMRUTHA DHIRAJ

COURSE CODE/TITLE : 21CIV24/ ELEMENTS OF CIVIL ENGINEERING AND MECHANICS

SEMESTER/YEAR : II / I-D Section

Sl. No.	Topics to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Execution Date
MODULE 1							
1	Overview of Civil Engineering Systems: Introduction to structural engineering, geotechnical engineering, Construction technology	L+D	LCD	1	1	07/06/2022	7/6/22
2	Hydraulics, water resources and irrigation engineering transportation engineering	L+D	LCD	1	2	08/06/2022	8/6/22
3	Environmental and sanitary engineering, GIS	L+D	LCD	1	3	08/06/2022	8/6/22
4	Earthquake engineering. Role of civil engineers in the development of the nation.	L+D	LCD	1	4	09/06/2022	9/6/22
5	Building materials: Stone, brick, wood	L+D	LCD	1	5	14/07/2022	18/6/22
6	glass, aluminum, cement	L+D	LCD	1	6	15/06/2022	18/6/22
7	aggregates, concrete, steel	L+D	LCD	1	7	15/06/2022	22/6/22
8	RCC, PSC, smart materials	L+D	LCD	1	8	16/06/2022	29/6/22

MODULE 2

9	Analysis of force systems: Concept of idealization, force, a system of forces, superposition, transmissibility, Resolution, and composition of forces	L+D	BB	1	9	18/06/2022	30/6/22
10	Law of Parallelogram of forces, polygonal law, Resultant of concurrent coplanar force system, coplanar non-concurrent force system, a moment of forces, couple	L+D	BB	1	10	18/06/2022	5/7/22
11	Varignons theorem, resultant of coplanar non-concurrent force system, free body diagram	L+D	BB	1	11	21/06/2022	6/7/22
12	Lamis theorem, equations of equilibrium, equilibrium of concurrent and non-concurrent coplanar force system	L+D,PS	BB	1	12	22/06/2022	6/7/22
13	Friction: Types of friction, laws of friction, limiting friction	L+D	BB	1	13	22/06/2022	7/7/22
14	Coefficient of friction concept of static and dynamic friction	L+D	BB	1	14	23/06/2022	7/7/22
15	Numerical problems on impending motion on horizontal and inclined planes along with connected bodies	L+D,PS	BB	1	15	25/06/2022	9/7/22 12/7/22
16	Numerical problems on impending motion on horizontal and inclined planes along with connected bodies	L+D,PS	BB	1	16	28/06/2022	10/7/22 20/7/22

MODULE 3

17	Centroid: Introduction, methods of determining the centroid	L+D	BB	1	17	29/06/2022	21/7/22
18	Locating the centroid of simple figures from first principle	L+D	BB	1	18	29/06/2022	26/7/22
19	Locating the centroid of composite and built-up sections	L+D,PS	BB	1	19	30/06/2022	26/7/22
20	Locating the centroid of composite and built-up sections	L+D,PS	BB	1	20	12/07/2022	28/7/22

21	Moment of inertia: Introduction, method of determining the second moment of area of plane sections from first principles	L+D	BB	1	21	13/07/2022	30/7/22
22	Parallel axis theorem and perpendicular axis theorem section modulus, the radius of gyration	L+D	BB	1	22	13/07/2022	2/8/22
23	Moment of inertia of composite area and built-up sections	L+D,PS	BB	1	23	14/07/2022	3/8/22(2)
24	Moment of inertia of composite area and built-up sections, concept of product of inertia (No problem)	L+D,PS	BB	1	24	19/07/2022	4/8/22 4/8/22
MODULE 4							
25	Support reactions: Types of loads and types of supports	L+D	BB	1	25	20/07/2022	5/8/22(2)
26	Statically determinate and indeterminate beams, support reactions in beams	L+D	BB	1	26	20/07/2022	13/8/22
27	Numerical problems on support reactions for statically determinate beams (point load, udl, uniformly varying loads and moments)	L+D,PS	BB	1	27	21/07/2022	13/8/22
28	Numerical problems on support reactions for statically determinate beams (point load, udl, uniformly varying loads and moments)	L+D,PS	BB	1	28	26/07/2022	17/8/22 17/8/22
29	Analysis of trusses: Types of trusses	L+D,PS	BB	1	29	27/07/2022	18/8/22
30	Analysis of statically determinate trusses using the method of joints	L+D,PS	BB	1	30	27/07/2022	18/8/22
31	Analysis of statically determinate trusses using the method of joints	L+D,PS	BB	1	31	28/07/2022	18/8/22

32	Analysis of statically determinate trusses using method of sections	L+D,PS	BB	1	32	30/07/2022	23/8/22
MODULE 5							
33	Kinematics: Displacement, average velocity, instantaneous velocity, speed, acceleration, average acceleration, variable acceleration, acceleration due to gravity	L+D	BB	1	33	10/08/2022	23/8/22
34	Newton's law of motion, rectilinear motion and numerical problems	L+D,PS	BB	1	34	10/08/2022	24/8/22
35	Curvilinear motion, super elevation	L+D,PS	BB	1	35	11/08/2022	25/8/22
36	Projectile motion	L+D,PS	BB	1	36	13/08/2022	25/8/22
37	Relative motion, numerical problems	L+D,PS	BB	1	37	16/08/2022	6/9/22
38	Motion under gravity, numerical problems	L+D,PS	BB	1	38	17/08/2022	7/9/22
39	Kinetics: D'Alembert's principle and its application in-plane motion	L+D,PS	BB	1	39	17/08/2022	7/9/22
40	Connected bodies including pulleys	L+D,PS	BB	1	40	18/08/2022	8/9/22

Total No. of Lecture Hours =40

Anantha D
Course In charge

W. Kalle
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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 : JAYASHREE G R
COURSE CODE/TITLE : 18EC61/7EC61/ Digital Communication
SEMESTER/YEAR : VI 'A' & V1 PB / 3rd year

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	Band pass signal to equivalent low pass: Introduction, Fourier transform, Hilbert transform	L+D	BB	1	1	4/4/2022	4/4/2022
2	Properties of Hilbert transform, Problems on Hilbert transform	L+D	BB	1	2	4/4/2022	4/4/2022
3	Pre envelopes, complex and canonical representation of band pass signal	L+D	BB	1	3	5/4/2022	5/4/2022
4	Complex low pass representation of band pass system, complex representation of band passes signals and systems.	L+D	BB	1	4	6/4/2022	6/4/2022
5	Line codes: Unipolar, polar	L+D	BB	1	5	6/4/2022	6/4/2022



6	Bipolar (AMI) and Manchester code	L+D	BB	1	6	7/4/2022	7/4/2022
7	Manchester code and their power spectral densities	L+D	BB	1	7	8/4/2022	8/4/2022
8	Problems and solutions	L+D	BB	1	8	11/4/2022	11/4/2022
9	Overview of HDB3 and B3ZS	L+D	BB	1	9	12/4/2022	12/4/2022
10	Overview of B6ZS	L+D	BB	1	10	13/4/2022	13/4/2022
MODULE 2							
11	Signalling over AWGN channels: Introduction to AWGN Channels	L+D	BB	1	11	18/4/2022	18/4/2022
12	Geometric representation of signals.	L+D	BB	1	12	19/4/2022	19/4/2022
13	Gram Schmidt orthogonalization procedure.	L+D	BB	1	13	20/4/2022	20/4/2022
14	Conversion of the continuous AWGN Channel into a vector channel	L+D	BB	1	14	20/4/2022	20/4/2022
15	Problems and solutions.	L+D	BB	1	15	22/4/2022	22/4/2022
16	Optimum receivers using coherent detection	L+D	BB	1	16	25/4/2022	25/4/2022
17	ML decoding	L+D	BB	1	17	26/4/2022	26/4/2022
18	Correlation receiver	L+D	BB	1	18	27/4/2022	27/4/2022
19	Matched filter receiver	L+D	BB	1	19	27/4/2022	27/4/2022
20	Problems and solutions	L+D	BB	1	20	28/4/2022	29/4/2022
MODULE 3							
21	Digital modulation techniques: Introduction , phase shift keying	L+D	BB	1	21	30/4/2022	30/4/2022


	techniques using coherent detection						
22	Generation detection and error probabilities of BPSK and QPSK	L+D	BB	1	22	2/5/2022	2/5/2022
23	M array PSK, M array QAM	L+D	BB	1	23	9/5/2022	9/5/2022
24	Frequency shift keying techniques using coherent detection	L+D	BB	1	24	10/5/2022	10/5/2022
25	BFSK generation, detection and error probability	L+D	BB	1	25	11/5/2022	13/5/2022
26	Non coherent orthogonal modulation techniques: BFSK	L+D	BB	1	26	14/5/2022	14/5/2022
27	DPSK symbol representation	L+D	BB	1	27	16/5/2022	16/5/2022
28	Problems and solutions	L+D	BB	1	28	23/5/2022	23/5/2022
29	Block diagram treatment of transmitter and receiver	L+D	BB	1	29	24/5/2022	24/5/2022
30	Probability of error	L+D	BB	1	30	28/5/2022	28/5/2022
MODULE 4							
31	Communication through band limited channels: Introduction, digital transmission through band limited channels	L+D	BB	1	31	30/5/2022	
32	Digital PAM transmission through Band limited signals for zero ISI	L+D	BB	1	32	30/5/2022	
33	Nyquist criterion, design of band limited signals with controlled ISI	L+D	BB	1	33	31/5/2022	

	partial response signals						
34	Problem and solutions	L+D	BB	1	34	1/6/2022	
35	Probability of error for detection of digital PAM	L+D	BB	1	35	2/6/2022	
36	Problems and solutions	L+D	BB	1	36	3/6/2022	
37	Probability of error for detection of digital PAM by Zero ISI	L+D	BB	1	37	11/6/2022	
38	Symbol by symbol detection of data with controlled ISI	L+D	BB	1	38	13/6/2022	
39	Channel equalization	L+D	BB	1	39	14/6/2022	
40	Linear equalizers	L+D	BB	1	40	15/6/2022	
MODULE 5							
41	Principles of spread spectrum: spread spectrum communication systems	L+D	BB	1	41	20/6/2022	
42	Model of spread spectrum digital communication system	L+D	BB	1	42	21/6/2022	
43	Direct sequence spread spectrum systems	L+D	BB	1	43	25/6/2022	
44	Effect of De spreading on a narrowband interference	L+D	BB	1	44	27/6/2022	
45	Probability of error	L+D	BB	1	45	28/6/2022	
46	Problems and solutions	L+D	BB	1	46	29/6/2022	
47	Applications of DS spread spectrum		BB	1	47	2/7/2022	

	signals						
48	Generation of PN sequences	L+D	BB	1	48	4/7/2022	
49	Frequency hopped spread spectrum	L+D	BB	1	49	5/7/2022	
50	CDMA based on IS 95	L+D	BB	1	50	8/7/2022	
51	REVISION	L+D	BB	0	50	8/7/2022	
52	REVISION	L+D	BB	0	50	9/7/2022	
53	REVISION	L+D	BB	0	50	9/7/2022	
54	REVISION	L+D	BB	0	50	9/7/2022	
55	REVISION	L+D	BB	0	50	10/7/2022	
56	REVISION	L+D	BB	0	50	10/7/2022	
57	REVISION	L+D	BB	0	50	10/7/2022	

Total No. of Lecture Hours = 50

Total No. of Tutorial Hours = 0


Course In charge


Head - Dept .


Principal

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

Professor & Head
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Director
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K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
SESSION: 2021-2022 (EVEN SEMESTER)

LESSON PLAN

NAME OF THE STAFF : TEJASWINI G V
COURSE CODE/TITLE : 18EE62 / POWER SYSTEM ANALYSIS-1
SEMESTER/YEAR : VI / 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	Representation of Power System Components: Introduction	L+D	BB	1	1	4/4/2022	6/4/22
2	Single-phase Representation of Balanced Three Phase Networks	L+D	BB	1	2	5/4/2022	6/4/22
3	One-Line Diagram	L+D	BB	1	3	7/4/2022	7/4/22
4	Impedance or Reactance Diagram	L+D	BB	1	4	8/4/2022	8/4/22
5	Per Unit (PU) System	L+D	BB	1	5	8/4/2022	11/4/22
6	Steady State Model of Synchronous Machine	L+D	BB	1	6	11/4/2022	12/4/22
7	Power Transformer	L+D	BB	1	7	12/4/2022	18/4/22
8	Transmission of electrical Power, Representation of Loads	L+D	BB	1	8	16/4/2022	19/4/22
9	Problems	L+D	BB,PS	1	9	18/4/2022	19/4/22 21/4/22
10	Problems	L+D	BB,PS	1	10	19/4/2022	22/4/22 22/4/22
MODULE 2							
11	Symmetrical Fault Analysis: Introduction	L+D	BB	1	11	21/4/2022	25/4/22
12	Transient on a Transmission Line	L+D	BB,PS	1	12	22/4/2022	26/4/22
13	Short Circuit of a Synchronous Machine(On No Load)	L+D	BB	1	13	22/4/2022	28/4/22

14	Short Circuit of a Synchronous Machine(On No Load)	L+D	BB	1	14	25/4/2022	6/5/22
15	Short Circuit of a Loaded Synchronous Machine	L+D	BB	1	15	26/4/2022	6/5/22
16	Selection of Circuit Breakers	L+D	BB	1	16	28/4/2022	7/5/22
17	Illustrative simple examples on power systems	L+D	BB,PS	1	17	29/4/2022	10/5/22
18	Problems	L+D	BB,PS	1	18	29/4/2022	10/5/22 13/5/22
19	Problems	L+D	BB,PS	1	19	2/5/2022	13/5/22
20	Problems	L+D	BB,PS	1	20	5/5/2022	14/5/22 19/5/22
MODULE 3							
21	Symmetrical Components: Introduction	L+D	BB	1	21	6/5/2022	20/5/22
22	Symmetrical Component Transformation	L+D	BB,PS	1	22	6/5/2022	23/5/22
23	Phase Shift in Star-Delta Transformers	L+D	BB,PS	1	23	12/5/2022	26/5/22
24	Sequence Impedances of Transmission Lines.	L+D	BB,PS	1	24	13/5/2022	27/5/22 27/5/22
25	Sequence Impedances and Sequence Network of Power System.	L+D	BB,PS	1	25	13/5/2022	30/5/22
26	Sequence Impedances and Networks of Synchronous Machine	L+D	BB,PS	1	26	14/5/2022	3/6/22
27	Sequence Impedances of Transmission Lines.	L+D	BB,PS	1	27	16/5/2022	3/6/22
28	Sequence Impedances and Networks of Transformers.	L+D	BB,PS	1	28	17/5/2022	13/6/22
29	Construction of Sequence Networks of a Power	L+D	BB,PS	1	29	19/5/2022	13/6/22
30	Problems	L+D	BB,PS	1	30	20/5/2022	13/6/22
MODULE 4							
31	Unsymmetrical Fault Analysis: Introduction.	L+D	BB	1	31	20/5/2022	14/6/22
32	Symmetrical Component Analysis of Unsymmetrical Faults.	L+D	BB	1	32	23/5/2022	27/6/22

33	Symmetrical Component Analysis of Unsymmetrical Faults,	L+D	BB	1	33	24/5/2022	28/6/22
34	Single Line-To-Ground (LG) Fault	L+D	BB	1	34	30/5/2022	30/6/22
35	Single Line-To-Ground (LG) Fault	L+D	BB	1	35	31/5/2022	1/7/22
36	Line-To-Line (LL) Fault,	L+D	BB	1	36	2/6/2022	11/7/22
37	Double Line-To-Ground (LLG) Fault	L+D	BB	1	37	3/6/2022	4/7/22
38	Double Line-To-Ground (LLG) Fault	L+D	BB	1	38	3/6/2022	4/7/22
39	Open Conductor Faults	L+D	BB	1	39	6/6/2022	4/7/22
40	Problems	L+D	BB,PS	1	40	7/6/2022	5/7/22
MODULE 5							
41	Power System Stability: Introduction	L+D	BB	1	41	9/6/2022	5/7/22
42	Dynamics of a Synchronous Machine	L+D	BB	1	42	10/6/2022	7/7/22
43	Power Angle Equation Salient pole Synchronous Machines	L+D	BB	1	43	10/6/2022	7/7/22
44	Power Angle Equation Non - Salient pole Synchronous Machines	L+D	BB	1	44	11/6/2022	9/7/22
45	Simple Systems	L+D	BB	1	45	16/6/2022	9/7/22
46	Steady State Stability	L+D	BB	1	46	17/6/2022	11/7/22
47	Transient Stability	L+D	BB	1	47	17/6/2022	11/7/22
48	Equal Area Criterion	L+D	BB	1	48	20/6/2022	11/7/22
49	Factors Affecting Transient Stability	L+D	BB	1	49	21/6/2022	12/7/22
50	Problems	L+D	BB,PS	1	50	23/6/2022	12/7/22
REVISION							
51	Revision	L+D	BB	1	51	24/6/2022	-
52	Revision	L+D	BB	1	52	24/6/2022	-
53	Revision	L+D	BB	1	53	27/6/2022	-
54	Revision	L+D	BB	1	54	28/6/2022	-
55	Revision	L+D	BB	1	55	30/6/2022	-
56	Revision	L+D	BB	1	56	1/7/2022	-
57	Revision	L+D	BB	1	57	4/7/2022	-
58	Revision	L+D	BB	1	58	5/7/2022	-

59	Revision	L+D	BB	1	59	7/7/2022	-
60	Revision	L+D	BB	1	60	8/7/2022	-
61	Revision	L+D	BB	1	61	8/7/2022	-
62	Revision	L+D	BB	1	62	9/7/2022	-
63	Revision	L+D	BB	1	63	14/7/2022	-
64	Revision	L+D	BB	1	64	15/7/2022	-
65	Revision	L+D	BB	1	65	15/7/2022	-

Total No. of Lecture Hours = 50

Total No. of Tutorial Hours = 13

Total No. of Revision Hours = 03

	Mode of Assignment and instructions*	Date
Assignment 1	Questions from module 1&2	4/5/2022
Assignment 2	Questions from module 2&3	14/6/2022
Assignment 3	Open Book test- Third Internal Assessment Syllabus	9/7/2022

Course in charge

Head of the Department

Principal

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



SCHOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF MANAGEMENT STUDIES
SESSION: 2020-2021 (EVEN SEMESTER)
LESSON PLAN

NAME OF THE STAFF : ROOPA BALAVENU
COURSE CODE/TITLE : 20MBAFM401 / RISK MANAGEMENT AND INSURANCE
SEMESTER/YEAR : IV SEMESTER
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	Unit I : Introduction to Risk Management and Risk Identification:	L+D	WB+LCD	1	1	9/05/2022	
2	Risk-Risk and Uncertainty-Types of Risk-Burden of Risk-	L+D	WB+LCD	1	2	10/05/2022	
3	Sources of Risk-Methods of handling Risk-Degree of Risk-	L+D	WB+LCD	1	3	11/05/2022	
4	Management of Risk. Risk Identification- Business Risk Exposures-	L+D	WB+LCD	1	4	12/05/2022	
5	Individual Exposures-Exposures of Physical Assets -	L+D	WB+LCD	1	5	13/05/2022	
6	Exposures of Financial Assets - Exposures of Human Assets -	L+D	WB+LCD	1	6	16/05/2022	
7	Exposures to Legal Liability - Exposure to Work-Related Injury. (Theory)	L+D	WB+LCD	1	7	17/05/2022	
8	Case study on Risk	L+D	WB+LCD	1	8	18/05/2022	
MODULE 2							
9	Unit II : Risk Measurement-	L+D	WB+LCD	1	9	20/05/2022	
10	Evaluating the Frequency and Severity of Losses-Risk	L+D	WB+LCD	1	10	23/05/2022	

	Control-							
11	Risk Financing Techniques- Risk Management Decision Methods-	L+D	WB+LCD	1	11	24/05/2022		
12	Pooling Arrangements and Diversification of Risk.	L+D	WB+LCD	1	12	25/05/2022		
13	Advanced Issues in Risk Management: The Changing Scope of Risk Management-	L+D	WB+LCD	1	13	26/05/2022		
14	Insurance Market Dynamics-Loss Forecasting-	L+D	WB+LCD	1	14	27/05/2022		
15	Financial Analysis in Risk Management	L+D	WB+LCD	1	15	28/05/2022		
16	Decision Making Other Risk Management Tools. (Theory)	L+D	WB+LCD	1	16	30/05/2022		
17	Case Study on Risk Measurement	L+D	WB+LCD	1	17	31/05/2022		
18	Unit III: Introduction to Insurance Risk and Insurance-	L+D	WB+LCD	1	18	2/06/2022		
19	Definition and Basic Characteristics of Insurance-	L+D	WB+LCD	1	19	3/06/2022		
20	Requirements of an Insurable Risk-Adverse Selection and Insurance-	L+D	WB+LCD	1	20	6/06/2022		
21	Insurance vs. Gambling Insurance vs. Hedging	L+D	WB+LCD	1	21	7/06/2022		
22	Types of Insurance-Essentials of Insurance Contracts.	L+D	WB+LCD	1	22	8/06/2022		
23	Indian Insurance Industry -	L+D	WB+LCD	1	23	9/06/2022		
24	Historical Framework of Insurance,	L+D	WB+LCD	1	24	10/06/2022		
25	Insurance sector Reforms in India. IRDA-Duties and powers of IRDA-IRDA Act 1999. (Theory)	L+D	WB+LCD	1	25	13/06/2022		
26	Case study	L+D	WB+LCD	1	26	14/06/2022		

MODULE 4

27	Unit IV : Life Insurance	L+D	WB+LCD	1	27	18/06/2022		
28	Basics of Life Insurance-Growth of Actuarial Science-	L+D	WB+LCD	1	28	20/06/2022		
29	Features of Life Insurance-Life Insurance Contract-	L+D	WB+LCD	1	29	21/06/2022		
30	Life Insurance Documents-Insurance Premium Calculations.	L+D	WB+LCD	1	30	25/06/2022		

31	Life Insurance Classification-	L+D	WB+LCD	1	31	27/06/2022	
32	Classification on the Basis –Duration-Premium Payment	L+D	WB+LCD	1	32	28/06/2022	
33	Participation in Profit-Number of Persons Assured-	L+D	WB+LCD	1	33	29/06/2022	
34	Payment of Policy Amount-Money Back Policies- Unit Linked Plans.	L+D	WB+LCD	1	34	30/06/2022	
35	Annuities-Need of Annuity Contracts, Annuity V/s Life Insurance, Classification of Annuities. (Theory)	L+D	WB+LCD	1	35	1/07/2022	
36	Case Study	L+D	WB+LCD	1	36	7/07/2022	
MODULE 5							
37	Unit V: General Insurance-Laws Related to General Insurance-	L+D	WB+LCD	1	37	8/07/2022	
38	Laws Related to General Insurance-	L+D	WB+LCD	1	38	9/07/2022	
39	General Insurance Contract-General Insurance Corporation(GIC).	L+D	WB+LCD	1	39	14/07/2022	
40	Health Insurance-Individual Medical Expense Insurance – Long Term Care Coverage – Disability Income Insurance – Medi-claim Policy – Group Medi-claim Policy – Personal Accident Policy – Child Welfare Policy-	L+D	WB+LCD	1	40	15/07/2022	
41	Employee Group Insurance – Features of Group Health Insurance – Group Availability Plan.	L+D	WB+LCD	1	41	16/07/2022	
42	Marine Insurance-Types of Marine Insurance –	L+D	WB+LCD	1	42	18/07/2022	
43	Marine Insurance principles Important Clauses in Marine Insurance– Marine Insurance Policies –Marine Risks-Clauses in Marine Policy.	L+D	WB+LCD	1	43	19/07/2022	
44	Motor Vehicles Insurance-Need for Motor Insurance, Types of Motor Insurance, Factors to be considered for Premium Fixing. (Theory)	L+D	WB+LCD	1	44	20/07/2022	
45	Case Studies	L+D	WB+LCD	1	45	21/07/2022	
46	Unit VI : Management of Insurance Companies Functions and Organization of Insurers-	L+D	WB+LCD	1	46	22/07/2022	
47	Types of Insurance Organization, Organizational	L+D	WB+LCD	1	47	25/07/2022	

Structure of Insurance Companies-Functions of Insurers.								
48	Underwriting-Principles of Underwriting.	L+D	WB+LCD	1	48	26/07/2022		
49	Underwriting in Life Insurance, Underwriting in nonlife Insurance.	L+D	WB+LCD	1	49	27/07/2022		
50	Claims Management- Claim Settlement in General Insurance and Life Insurance	L+D	WB+LCD	1	50	28/07/2022		
51	Revision Hours	L+D	WB+LCD	1	51	29/07/2022		
52	Revision Hours	L+D	WB+LCD	1	52	30/07/2022		

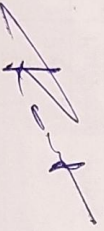
Total No. of Lecture Hours = 48

Total No. of Case study Hours = 2

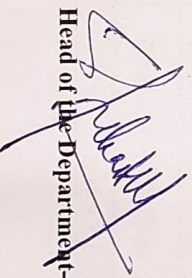
Total No. of Revision Hours = 2

	Mode of Assignment and instructions	Date
Assignment 1	Students are expected to solve theory questions from VTU old question papers.	8/06/2022
Assignment 2	Students should do assignment on visiting Insurance Company website for understand their claim settlement and types of Insurance and present it in the class.	4/07/2022
Assignment 3	Students are expected to solve CASES from VTU old question papers.	1/08/2022

Course In charge



Head of the Department-MBA



Principal

Dr. K. RAMA NARASIMHA

Principal/Director

K S School of Engineering and Management
Bangalore - 560 109





KSSEM

HOOL OF ENGINEERING AND MANAGEMENT, BENGALURU - 560109
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SESSION: 2021-2022 (EVEN SEMESTER)

LESSON PLAN

NAME OF THE STAFF : SANTOSH KUMAR K J

COURSE CODE/TITLE : 18ME61/ FINITE ELEMENT METHOD

SEMESTER/YEAR : VI / III

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date	Execution Date
MODULE I							
1	Introduction to Finite Element Method: General description of the finite element method. Engineering applications of finite element method	L+D	BB	1	1	4/4/2022	4/4/22
2	Boundary conditions: homogeneous and nonhomogeneous for structural, heat transfer and fluid flow problems	L+D	BB	1	2	5/4/2022	4/4/22
3	Potential energy method	L+D	BB	1	3	6/4/2022	8/4/22
4	Problems on Potential energy method	L+D	BB	1	4	7/4/2022	8/4/22
5	Tutorial	L+D	BB	1	4	8/4/2022	7/4/22
6	Problems on Potential energy method	L+D	BB	1	5	11/4/2022	7/4/22
7	Rayleigh Ritz method, Galerkin's method and Displacement method of finite element formulation	L+D	PS	1	6	12/4/2022	8/4/22
8	Problems	L+D	PS	1	7	13/4/2022	11/4/22
9	Problems	L+D	PS	1	8	18/4/2022	11/4/22
10	Convergence criteria, Discretization process, Types of elements: 1D, 2D and 3D, Node numbering, Location of nodes	L+D	BB	1	9	19/4/2022	12/4/22
11	Strain displacement relations, Stress strain relations, Plain stress and Plain strain conditions, temperature	L+D	BB	1	10	20/4/2022	12/4/22

effects	L+D	BB	0	10	22/4/2022	19/4/22
MODULE 2						
12	Tutorial					
	One-Dimensional Elements-Analysis of Bars Trusses:					
13	Linear interpolation polynomials in terms of local coordinate's for 1D, 2D elements	L+D	BB	1	11	19/4/22
14	Higher order interpolation functions for 1D quadratic and cubic elements in natural coordinates	L+D	BB	1	12	20/4/22
15	Constant strain triangle, Four-Nodded Tetrahedral Element (TET 4), Eight-Nodded Hexahedral Element (HEXA 8)	L+D	BB	1	13	21/4/22
16	2D isoperimetric element, Lagrange interpolation functions, Numerical integration: Gaussian quadrature one point, two point formulae, 2D integrals,	L+D	BB	1	14	22/4/22
17	Solution for displacement, stress and strain in 1D straight bars, stepped bars and tapered bars using elimination approach and penalty approach	L+D	BB	1	15	22/4/22
18	Tutorial	L+D	BB	1	16	23/4/22
19	Solution for displacement, stress and strain in 1D straight bars, stepped bars and tapered bars using elimination approach and penalty approach	L+D	BB	1	17	26/4/22
20	Solution for displacement, stress and strain in 1D straight bars, stepped bars and tapered bars using elimination approach and penalty approach	L+D	PS	1	18	27/4/22
21	Analysis of trusses	L+D	PS	1	19	28/4/22
22	Analysis of trusses	L+D	PS	1	19	28/4/22
23	Tutorial	L+D	BB	0	20	4/5/2022
MODULE 3						
24	Analysis of trusses	L+D	BB	1	21	10/5/2022
25	Beams and Shafts: Boundary conditions, Load vector, Hermite shape functions, Beam stiffness matrix based on Euler-Bernoulli beam theory	L+D	BB	1	22	11/5/2022
26	Examples on cantilever beams, propped cantilever beams, and stepped beams using direct stiffness method with	L+D	BB	1	23	13/5/22
27		L+D	PS	1	24	19/5
28		L+D	PS	1	24	

	concentrated and uniformly distributed load.								
29	Numerical problems on simply supported, fixed straight and stepped beams using direct stiffness method with concentrated and uniformly distributed load.	L+D	PS	1	25	25/3/2022			25/3/22
30	Torsion of Shafts: Finite element formulation of shafts	L+D	BB	1	26	26/3/2022			25/3/22
31	Finite element formulation of shafts	L+D	BB	1	27	27/3/2022			25/3/22
32	Tutorial	L+D	PS	1	27	28/5/2022			25/3/22
33	Determination of stress and twists in circular shafts.	L+D	PS	1	28	30/3/2022			30/3/22
34	Determination of stress and twists in circular shafts.	L+D	PS	1	29	31/3/2022			31/3/22
35	Determination of stress and twists in circular shafts.	L+D	PS	1	30	6/6/2022			1/6/22
MODULE 4									
36	Heat Transfer: Basic equations of heat transfer	L+D	BB	1	31	7/3/2022			9/6/22
37	Energy balance equation,	L+D	BB	1	32	8/3/2022			2/6/22
38	Rate equation: conduction, convection, radiation	L+D	BB	1	33	9/4/2022			3/6/22
39	1D finite element formulation using vibration method	L+D	BB	1	34	10/4/2022			14/1/22
40	Problems with temperature gradient and heat fluxes	L+D	BB	1	35	13/4/2022			2-8/6/22
41	Problems with temperature gradient and heat fluxes	L+D	BB	1	36	14/4/2022			20/6/22
42	Heat transfer in composite sections, straight fins	L+D	BB	1	37	15/4/2022			11/7/22
43	Problems on Fins	L+D	BB+PS	1	38	16/4/2022			11/7/22
44	Fluid Flow: Flow through a porous medium, Flow through pipes of uniform and stepped sections	L+D	BB	1	39	17/4/2022			6/7/22
45	Flow through hydraulic networks	L+D	BB+PS	1	40	18/4/2022			8/7/22
46	Tutorial	L+D	BB	1	40	20/4/2022			6/7/22

MODULE 5

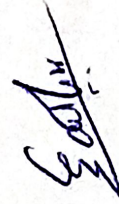
MODULE 5									
47	Axi-symmetric Solid Elements: Derivation of stiffness matrix of axisymmetric bodies with triangular elements,	L+D	BB	1	41	21/4/2022			6/7/22
48	Numerical solution of axisymmetric triangular element(s) subjected to surface forces, point loads, angular velocity, pressure vessels	L+D	BB+PS	1	42	22/4/2022			6/7/22
49	Numerical solution of axisymmetric triangular element(s) subjected to surface forces, point loads, angular velocity, pressure vessels	L+D	BB+PS	1	43	23/4/2022			6/7/22
50	Dynamic Considerations: Formulation for point mass and distributed masses,	L+D	BB	1	44	24/4/2022			7/7/22
51	Consistent element mass matrix of one-dimensional bar element, truss element, axisymmetric triangular element, quadrilateral element, beam	L+D	BB	1	45	25/4/2022			7/7/22

element									
52	Lumped mass matrix of bar element, truss element	L+D	BB	1	46	27/4/2022	7/7/22		
53	Evaluation of eigen values and eigen vectors, Applications to bars, stepped bars, and beams	L+D	BB	1	47	28/4/2022	8/7/22		
54	Evaluation of eigen values and eigen vectors, Applications to bars, stepped bars, and beams	L+D	PS	1	48	29/2022	8/7/22		
55	Evaluation of eigen values and eigen vectors, Applications to bars, stepped bars, and beams	L+D	BB	1	49	30/5/2022	8/7/22		
56	Evaluation of eigen values and eigen vectors, Applications to bars, stepped bars, and beams	L+D	BB	1	50	1/7/2022	11/7/22		
REVISION									
57	Module 1	L+D	BB+PS	1	50	7/7/2022	12/7/22		
58	Module 2	L+D	BB+PS	1	50	7/7/2022	12/7/22		
59	Module 3	L+D	BB+PS	1	50	8/7/2022	12/7/22		
60	Module 4	L+D	BB+PS	1	50	8/7/2022	12/7/22		
61	Module 5	L+D	BB+PS	1	50	9/7/2022	12/7/22		

Total No. of Lecture Hours = 50

Total No. of Tutorial Hours = 06

Total No. of Revision Hours = 05



Course In charge



Head of the Department



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

Principal