**Course wise Teaching Plan for Session : Summer 2019****Course : APPLIED NUMERICAL METHODS & OPTIMIZATION Faculty : santosh.hiremath@raisoni.net - SANTOSH HIREMATH**

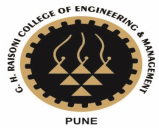
Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Concept of convergence-relevance to numerical methods.	03/12/2018	BEML212	B
1	1	Introduction to ANMO and MATLAB	06/12/2018	BEML212	B
1	1	Introduction to ANMO and MATLAB	06/12/2018	BEML212	B
1	2	Types of Errors: Absolute, Relative, Algorithmic, Truncation, Round off Error, Error Propagation,	06/12/2018	BEML212	B
1	2	Types of Errors: Absolute, Relative, Algorithmic, Truncation, Round off Error, Error Propagation,	06/12/2018	BEML212	B
1	2	Newton Raphson method	10/12/2018	BEML212	B
1	3	Bisection Method	13/12/2018	BEML212	B
1	3	Bisection Method	13/12/2018	BEML212	B
1	4	False position Method	13/12/2018	BEML212	B
1	4	False position Method	13/12/2018	BEML212	B
2	3	Gauss Elimination Method Partial pivoting,	17/12/2018	BEML212	B
1	5	Successive approximation method	20/12/2018	BEML212	B
1	5	Successive approximation method	20/12/2018	BEML212	B
2	6	Gauss Elimination Method	20/12/2018	BEML212	B
2	6	Gauss Elimination Method	20/12/2018	BEML212	B
2	4	Thomas algorithm for Tridiagonal Matrix	24/12/2018	BEML212	B
3	5	Graphical Method	31/12/2018	BEML212	B
2	7	Gauss-Seidal method	03/01/2019	BEML212	B
2	7	Gauss-Seidal method	03/01/2019	BEML212	B
2	8	Gauss-Seidal method	03/01/2019	BEML212	B
2	8	Gauss-Seidal method	03/01/2019	BEML212	B
3	6	Genetic Algorithm (GA)	07/01/2019	BEML212	B
4	7	Power equation, Exponential equation and Quadratic equation.	14/01/2019	BEML212	B



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Unit	Topic Code	Topic Covered	Date	Course	Section
2	9	Thomas algorithm for Tridiagonal Matrix	17/01/2019	BEML212	B
2	9	Thomas algorithm for Tridiagonal Matrix	17/01/2019	BEML212	B
3	10	Introduction to optimization, Classification, Constrained optimization	17/01/2019	BEML212	B
3	10	Introduction to optimization, Classification, Constrained optimization	17/01/2019	BEML212	B
3	11	Simplex Method	31/01/2019	BEML212	B
3	11	Simplex Method	31/01/2019	BEML212	B
3	12	Newton's Method	31/01/2019	BEML212	B
3	12	Newton's Method	31/01/2019	BEML212	B
5	9	Simpson's 1/3rd rule	04/02/2019	BEML212	B
3	13	Simulated Annealing (SA)	07/02/2019	BEML212	B
3	13	Simulated Annealing (SA)	07/02/2019	BEML212	B
4	14	Least square technique- Straight line	07/02/2019	BEML212	B
4	14	Least square technique- Straight line	07/02/2019	BEML212	B
5	10	Gauss Quadrature 3 point method	11/02/2019	BEML212	B
4	15	Lagrange,s Interpolation	14/02/2019	BEML212	B
4	15	Lagrange,s Interpolation	14/02/2019	BEML212	B
4	16	Newton,s Forward interpolation	14/02/2019	BEML212	B
4	16	Newton,s Forward interpolation	14/02/2019	BEML212	B
6	11	Modified Euler Method(Iterative)	25/02/2019	BEML212	B
4	8	Hermit Interpolation	28/02/2019	BEML212	B
4	17	Inverse interpolation.	28/02/2019	BEML212	B
4	17	Inverse interpolation.	28/02/2019	BEML212	B
5	18	Trapezoidal rule	28/02/2019	BEML212	B



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Unit	Topic Code	Topic Covered	Date	Course	Section
5	18	Trapezoidal rule	28/02/2019	BEML212	B
6	12	Introduction to finite difference method, PDEs- Parabolic explicit solution	04/03/2019	BEML212	B
5	19	Simpson's 3/8th rule	07/03/2019	BEML212	B
5	19	Simpson's 3/8th rule	07/03/2019	BEML212	B
5	20	Gauss Quadrature 2 point method	07/03/2019	BEML212	B
5	20	Gauss Quadrature 2 point method	07/03/2019	BEML212	B
5	21	Double Integration: Trapezoidal rule	14/03/2019	BEML212	B
5	21	Double Integration: Trapezoidal rule	14/03/2019	BEML212	B
6	22	Taylor series method, Euler Method	14/03/2019	BEML212	B
6	22	Taylor series method, Euler Method	14/03/2019	BEML212	B
6	13	Revision of Difficult Problems	18/03/2019	BEML212	B
6	23	Runge Kutta fourth order Method	21/03/2019	BEML212	B
6	23	Runge Kutta fourth order Method	21/03/2019	BEML212	B
6	24	Runge Kutta 2nd order method	21/03/2019	BEML212	B
6	24	Runge Kutta 2nd order method	21/03/2019	BEML212	B
6	14	Revision of Difficult Problems	25/03/2019	BEML212	B
6	25	Ellipticexplicit solution	28/03/2019	BEML212	B
6	25	Ellipticexplicit solution	28/03/2019	BEML212	B
6	26	Ellipticexplicit solution	28/03/2019	BEML212	B
6	26	Ellipticexplicit solution	28/03/2019	BEML212	B