
	GURGAON INSTITUTE OF TECHNOLOGY & MANAGEMENT
	COURSE PLAN

Name of the Teacher: Rajbir Singh	
Department: Applied Science	Session Jan-May 2018
Branch/Semester: CSE 3 rd & ECE 3 rd	Subject Name & Code: Math-201 F

- A. N.P. Bali, Engineering Mathematics Sixth Edition, Lakshmi Publications
 B. B.S. Grewal, Higher Engineering Mathematics, Khanna Publications. (34th edition)
 C. B.V. Ramana, Higher Engineering Mathematics Fifth Edition, The McGraw-Hill Companies

Lecture No.	Topics to be Covered
1.	Fourier series - Euler's formulae, Fourier expansion of odd and even functions
2.	Dirichlet's Conditions for a Fourier expansion & Fourier expansion of discontinuous function.
3.	Change of Interval
4.	Half range series
5.	Parseval's identity of Fourier series
6.	Fourier expansion of Some Typical waveforms
7.	Fourier integral & Fourier transform
8.	Fourier Sine & Cosine transform & their inversion Formulas
9.	Properties of fourier transform
10.	Convolution Theorem of Fourier Transform
11.	Parseval's identity of Fourier Transform
12.	Fourier Transform of Derivatives of a Function
13.	Applications of Fourier Transform to boundary value problem
14.	Fourier Transform of Integrals & Dirac-Delta Function
15.	Functions of Complex Variable - exponential function, trigonometric function hyperbolic
16.	Functions of Complex Variable- logarithmic function ,Hyperbolic & inverse hyperbolic Function
17.	Limit and continuity of a function

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18.	Differentiability & Analyticity of a function
19.	CauchyRiemann equations, necessary and sufficient condition for a function to be analytic
20.	Polar form of the Cauchy-riemann equations, harmonic functions
21.	Application to flow problems
22.	Integration of complex functions- Cauchy-Integral theorem and Formula
23.	Power series, radius and circle of convergence
24.	Taylor's and Maclaurin's and Laurent's series
25.	Zeroes and singularities of complex functions residues
26.	Evaluation of real Integrals using residues (around unit and semicircle only)
27.	Conditional probability
28.	Bayes theorem and its applications
29.	Expected value of a random variable
30.	Properties and application of binomial &Poisson distributions
31.	Properties of Normal distributions
32.	Linear programming problem formulation
33.	Solving linear programming problem using Graphical method
34	Solving linear programming problem using Simplex method
35	Solving linear programming problem using Dual simplex method

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Lecture No.	Topics to be Covered
36	Hypothesis Testing -Introduction
37	Hypothesis testing of large samples
38	Large Sample continued
39	Small Sample Test
40	Hypothesis testing of Small Samples continued