

Lesson Plan (Math II)

NAME OF THE FACULTY: Sh. Ravish

DISCIPLINE: Comp./ECE

SEMESTER: SECOND

SUBJECT: Applied Mathematics II

LESSON PLAN DURATION: 16 weeks (w.e.f. 15/02/24)

WORK LOAD PER WEEK: Lectures = 4

Week	Theory
1	<ol style="list-style-type: none"> 1. Definition of function; Concept of limits (Introduction only) and problems related to four standard limits only. 2. Differentiation of x^n, $\sin x$, $\cos x$, e^x by first principle. 3. Differentiation of sum, product and quotient of functions
2	<ol style="list-style-type: none"> 1. Differentiation of trigonometric functions. 2. Differentiation of inverse trigonometric functions 3. Logarithmic differentiation
3	<ol style="list-style-type: none"> 1. Successive differentiation. 2. Application of differential calculus. 3. Rate measures.
4	<ol style="list-style-type: none"> 1. Maxima and minima. 2. Revision. 3. Queries
5th week - 1st Sessional test 15.03.2024 TO 21.03.2024	
6	<ol style="list-style-type: none"> 1. Integration as inverse operation of differentiation with simple examples. 2. Simple standard integrals and related problems. 3. Integration by Substitution method.
7	<ol style="list-style-type: none"> 1. Integration by parts. 2. Evaluation of definite integrals of $\sin^n x$. 3. Evaluation of definite integrals of $\cos^n x$.
8	<ol style="list-style-type: none"> 1. Evaluation of definite integrals of $\cos^n x$ cntd. 2. Revision
9	<ol style="list-style-type: none"> 1. Evaluation of definite integrals of $\sin^n x \cos^n x$. 2. Applications of integration : for evaluation of area under a curve and axes (Simple problems).
10	10th week - 2ND Sessional test 22.04.2024 TO 26.04.2023
11	<ol style="list-style-type: none"> 1. Numerical integration by Trapezoidal Rule and Simpson's 1/3rd Rule using pre-existing mathematical models.
12	<ol style="list-style-type: none"> 1. Definition, order, degree, Type of differential Equations, linearity, Formulation of ordinary differential equation (up to 1st order).
13	<ol style="list-style-type: none"> 1. Solution of ODE (1st order) by variable separation method, Measures of Central Tendency: Mean, Median, Mode.
14	<ol style="list-style-type: none"> 1. Measures of Dispersion: Mean deviation, Standard deviation. 2. Sci. Lab software – Theoretical Introduction. 3. Basic difference between MATLAB and Sci. Lab software, 5.5 Calculations with MATLAB or Sci. Lab - (a) Representation of matrix (2×2 order), (b) Addition, Subtraction of matrices (2×2 order) in MATLAB or Sci. Lab
15th week- 3rd Sessional test 27.05.2024 TO 31.05.2024	
16	<ol style="list-style-type: none"> 1. Doubt session and Revision. 2. Revision and discussion of previous year Q. Papers

