Curriculum Plan (ODD SEM 2026-27): B.Sc. (Physical Science) III Sem

DSC- A-3:Differential Equations

Teacher'S Profile

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Marks Distribution	**Theory**	90 Marks
	Internal Assessment	30 Marks
	Continuous Assessment	40 Marks
		Assignments -12 Marks
		Test - 12 Marks
		Attendance - 6 Marks
Classes Assigned	**Lectures**	2 Per Week
	Tutorial	1 Per Week

Essential Readings

1. Myint-U, Tyn and Debnath, Lokenath (2007). Linear Partial Differential Equations for Scientist and Engineers (4th ed.). Birkhäuser. Indian Reprint.
2. Ross, Shepley L. (1984). Differential Equations (3rd ed.). John Wiley & Sons.

Week	Topics
1st Week (28 JUL-01 AUG)	Basic theory of higher order linear differential equations
2nd Week (03-08 AUG)	Wronskian and its properties
3rd Week (10-15 AUG)	Linear homogeneous equations with constant coefficients
4th Week (17-22 AUG)	Linear non-homogeneous equations, Method of undetermined coefficients
5th Week (24-29 AUG)	Method of variation of parameters (only second order)
6th Week (31 AUG-05 SEP)	Two-point boundary value problems, Cauchy- Euler equations
7th Week (07- 12 SEP)	Systems of linear differential equations
8th Week (14-19 SEP)	Partial differential equations: Basic concepts and definitions
9th Week (21-26 SEP)	Classification and construction of first- order partial differential equations
10th Week (28 SEP-03 OCT)	Method of characteristics and general solutions of first order partial differential equations
11th Week (05 -10 OCT)	Canonical forms and method of separation of variables for first-order partial differential equations
12th Week (12-17 OCT)	Canonical forms and method of separation of variables for first-order partial differential equations
13th Week (26-31 OCT)	Classification and reduction to canonical forms of second-order linear partial differential equations and their general solutions
14th Week (02-07 NOV)	Classification and reduction to canonical forms of second-order linear partial differential equations and their general solutions
15thWeek (09–14 NOV)	Revision
16th Week (16-20 NOV)	Revision