

## I – Academic Planner

### A. Teaching Plan (Year: August 2020 Semester: Odd)

Teacher's Name: Neha Agrawal

Department: Mathematics

S. No	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1.	42357501	Differential Equations (B.Sc. (Prog.) Physical Sciences Vth Semester)	DSE	First Order Ordinary differential Equations, solvable for $x, y, p$ , Reduction of order	10 August' 2020	15 September' 2020
				Higher Order Ordinary Differential Equations, Cauchy-Euler's equation	16 September' 2020	05 October' 2020
				Partial Differential Equations, Charpit's Method, Canonical forms	06 October' 2020	27 November' 2020
2.	32357501	Numerical Methods (B.Sc. (Hons.) Mathematics Vth Semester)	DSE	Convergence, Root finding Techniques, System of Equations	10 August' 2020	22 September' 2020
				Interpolation, Finite Difference operators	23 September' 2020	20 October'2020
				Differentiation, Integration, Euler's Method	21 October'2020	27 November' 2020
3.	42353503	Statistical Software: R (B.Sc. (Prog.) Physical Sciences Vth Semester)	SEC	Using R as a calculator, reading and getting data into R, Types and Structures of data items, Manipulating Vectors, Data Frames, Constructing data objects and their Conversions	10 August' 2020	10 October' 2020

				Stem and Leaf plot, Histograms, Box plots, Scatter Plots, Pair plots, line charts, pie charts, bar charts	11 October' 2020	27 November' 2020
4.	32355101	Calculus (B.A./ B.Sc. (Hons.) other than Mathematics Ist Semester)	GE	Derivative tests, Limits, Asymptotes, Graphs of Functions, L' Hopital Rule Volumes of solids by Disk, Washer and Shell Methods, Lengths of Curves, Surface area of Revolution Conics, Tracing of Conics, Polar Coordinates Vector Valued Functions, Functions of Several Variables, Partial Derivatives and Continuity, Directional Derivatives, Tangent Plane and Normal Lines Extreme Values	18 November, 2020 21 December,2020 29 January' 2021 13 February'2021	20 December,2020 28 January' 2021 12 February' 2021 05 March' 2021

**Teaching Plan (Year: 2021 Semester: Even)**

Teacher's Name: Neha Agrawal

Department: Mathematics

S. No	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1.	32351202	Differential Equations (B.Sc. (Hons.) Mathematics IInd Semester )	Core	Differential Equations and Mathematical models, reducible Second order differential equations, Applications Compartmental models, case studies of lake Pollution, alcohol in bloodstream, Population models Higher order linear homogeneous and non Homogeneous Differential equations, Euler's equation, Mechanical Vibrations	01 April' 2021 17 May' 2021 11 June' 2021	03 May' 2021 10 June' 2021 15 July' 2021

				Equilibrium points, phase plane analysis of Models like battle model, epidemic model, Predator – prey model	16 July' 2021	02 August' 2021
2.	42357618	Numerical Methods (B.Sc. (Prog.) Physical Sciences VIth Semester )	DSE	Convergence, Root finding techniques, System of equations	02 January' 2021	16 February' 2021
				Interpolation, Finite Difference operators	17 February'2021	23 March' 2021
				Numerical Differentiation, Integration, Euler's Method, Runge Kutta Method	31 March'2021	29 April' 2021
3.	42353327	Mathematical Typesetting System: LaTeX (B.Sc. (Prog.) Physical Sciences IVth Semester )	SEC	Introduction to LaTeX, Mathematical Typesetting	02 January' 2021	23 March' 2021
				Introduction to graphics, PStricks	31 March' 2021	29 April' 2021

**B. FDP/Seminar/Workshops/Lectures to be attended and/or to be conducted by Teachers**

<b>Event Topic</b>					
<b>Type / Nature (FDP/Webinar/Workshop etc.)</b>					
<b>Organizing In-charge</b>					
<b>Details regarding invited Resource Person</b>					
<b>Nature of Participation (e.g. Invited Speaker, Participant etc.)</b>					
<b>Date/s</b>		<b>Timing/s</b>		<b>Mode</b>	

**C. Internal Assessment: House Exam (Test/Presentation etc.) & Assignment\***

<b>Course Code</b>	<b>Course Name</b>	<b>Unique Paper Code</b>	<b>Topic Name</b>	<b>Day and Date</b>	<b>Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining</b>
563	B.Sc. (Hons.) Mathematics Vth Semester	32357501	Root finding and System of Equations, interpolation, finite difference operators	26 October' 2020	11 November' 2020
582	B.Sc. (Prog.) Physical Sciences Vth Semester	42357501	Ordinary Differential Equations	21 October' 2020	13 November' 2020
582	B.Sc. (Prog.) Physical Sciences Vth Semester	42353503	Types and Structures of data items, Manipulating Vectors, Data Frames	20 October' 2020	10 November' 2020
	Calculus (B.A./ B.Sc. (Hons.) other than Mathematics Ist Semester)	32355101	Volumes of solids, Lengths of Curves, Surface area of Revolution	10 February' 2021	18 February' 2021

<b>Course Code</b>	<b>Course Name</b>	<b>Unique Paper Code</b>	<b>Topic Name</b>	<b>Day and Date</b>	<b>Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining</b>
563	B.Sc. (Hons.) Mathematics IIInd Semester	32351202	Mathematical Modelling, exact differential equations, lake pollution model, population model	24 June' 2021	21 July' 2021
582	B.Sc. (Prog.) Physical Sciences VIth Semester	42357618	Root Finding Methods, System of Equations, Finite Difference Operators, interpolation	19 March' 2021	02 April' 2021
582	B.Sc. (Prog.) Physical Sciences IVth Semester	42353327	Mathematical Typesetting	01 April' 2021	13 April' 2021

**\*Marks of the Internal Assessment to be submitted to the College 15 days before the last working day of every semester**

**D. Organization of Department/College Society Meetings by Staff Advisor/Convener**

<b>Department/Society</b>	<b>Meeting Date</b>	<b>Purpose</b>

**E. College Functions**

<b>College Function</b>	<b>Function Date</b>	<b>Role to be played</b>