

Academic Planner

A. Teaching Plan

Teacher's Name: **S.K. Sharma**

Department: **MATHEMATICS**

Year: **2016-2017 (Odd Semester)**

Course: **B.Sc. (Hons.) Mathematics**

Sl. No	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1	32351301	Theory of Real function	Core	Definition of the limit, Sequential criterion for limits, Criterion for non-existence of limit.	20/07/2016	01/08/2016
2	32351301	Theory of Real function	Core	Algebra of limits of functions with illustrations and examples, Squeeze theorem.	02/08/2016	12/08/2016
3	32351301	Theory of Real function	Core	Definition and illustration of the concepts of one-sided limits, Infinite limits and limits at infinity.	13/08/2016	25/08/2016
4	32351301	Theory of Real function	Core	Definitions of continuity at a point and on a set, Sequential criterion for continuity,	26/08/2016	10/09/2016

				Algebra of continuous functions, Composition of continuous functions.		
5	32351301	Theory of Real function	Core	Various properties of continuous functions defined on an interval, viz., Boundedness theorem, Maximum-minimum theorem, Statement of the location of roots theorem, Intermediate value theorem and the preservation of intervals theorem.	11/09/2016	25/09/2016
6	32351301	Theory of Real function	Core	Definition of uniform continuity, Illustration of non-uniform continuity criteria, Uniform continuity theorem.	26/09/2016	01/10/2016
7	32351301	Theory of Real function	Core	Differentiability of a function, Algebra of differentiable functions, Carathéodory's theorem and chain rule.	02/10/2016	10/10/2016
				Semester Break		
8	32351301	Theory of Real function	Core	Relative extrema, Interior extremum theorem, Mean value theorem and its applications, Intermediate value property of derivatives - Darboux's theorem.	17/10/2016	25/10/2016
9	32351301	Theory of Real function	Core	Capital market line, Sharpe index. Capital Asset Pricing Model (CAPM), betas of stocks and portfolios.	26/10/2016	02/11/2016

10	32351301	Theory of Real function	Core	Taylor polynomial, Taylor's theorem and its applications, Taylor's series expansions of e^x , $\sin x$ and $\cos x$.	02/11/2016	11/11/2016
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Sl. No	UPC	Paper Name	Core/AECC/GE/SEC	Topic/Unit	Start Date	End Date
1		Algebra	Core	Symmetries of a square, Dihedral groups, definition and examples of groups including permutation groups and quaternion groups (illustration through matrices),	20/07/2016	12/08/2016
2		Algebra	Core	elementary properties of groups. Subgroups and examples of subgroups, centralizer, normalizer, center of a group, product of two subgroups.	13/08/2016	30/08/2016
3		Algebra	Core	Properties of cyclic groups, classification of subgroups of cyclic groups.	01/09/2016	15/09/2016
4		Algebra	Core	Cycle notation for permutations, properties of permutations, even and odd permutations, alternating group, properties of cosets, Lagrange's theorem and consequences including Fermat's Little theorem	16/09/2016	10/10/2016

				External direct product of a finite number of groups		
				Semester break		
5		ALgebra	Core	normal subgroups, factor groups, Cauchy's theorem for finite abelian groups Group homomorphisms	17/10/2016	28/10/2016
6		Algebra	Core	properties of homomorphisms, Cayley's theorem, properties of isomorphisms, First, Second and Third isomorphism theorems.	29/10/2016	11/11/2016

A. Outstation Field visits for students

Project Name / Paper Name	N.A.				
Destination	N.A.	Travel Mode	N.A.		
Departure Month	N.A.	Return	N.A.		
Faculty-in-Charge	N.A.	Number of Students going	N.A.		

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

Course Code	Course Name	Unique Paper Code	Topic Name	Day and Date	Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining
563	B.Sc. (Hons.) Mathematics (III sem)		Algebra	27/10/2016	29/10/2016
582	B.Sc. (Hons.) Mathematics (III sem)	32351301	Theory of Real Functions	06/10/2016	10/10/2016

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

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

Department/Society	Meeting Date	Purpose

D. College Functions