

I – Academic Planner

A. Teaching Plan (Year: 2021-2022 Semester: Odd and Even)

Teacher's Name: Dr Vibha G. Checker Department: Botany

S. No.	UPC	Paper Name	Core/AE CC/GE/S EC	Topic/Unit	Start Date	End Date
ODD SEMESTER						
1.	32161301	Anatomy of Angiosperms Theory	Core	Unit 6 Unit 7 Unit 8 Unit 9 Unit 10	16 Aug 6 Sept 4 Oct 11 Oct 8 Nov	30 Aug 28 Sept 5 Oct 1 Nov 9 Nov
2.	32167502	Biostatistics Theory	DSE	Unit 3 Unit 4 Unit 5	16 Aug 13 Sept 25 Oct	7 Sept 19 Oct 23 Nov
3.	32167502	Biostatistics Practical	DSE	4. Calculation of mean, median, mode, standard deviation and standard error 5. Calculation of correlation coefficient values and finding out the probability 6. Calculation of 'F' value and finding out the probability value for the F value.	11 Aug	24 Nov
4.	42164301	Plant Anatomy and Embryology Theory	Core	Unit 1 Unit 2 Unit 3 Unit 4	18 Aug 15 Sept 29 Sept 27 Oct	8 Sept 22 Sept 20 Oct 17 Nov
5.	42164301	Plant Anatomy and	Core	13. Study of meristems through permanent	12 Aug	25 Nov

		Embryology Practical		<p>slides and photographs.</p> <p>14. Tissues (parenchyma, collenchyma and sclerenchyma); Macerated xylary elements, Phloem (Permanent slides, photographs)</p> <p>15. Stem: Monocot: Zea mays; Dicot: Helianthus.</p> <p>16. Root: Monocot: Zea mays; Dicot: Helianthus</p> <p>17. Leaf: Dicot and Monocot (only Permanent slides).</p> <p>18. Adaptive anatomy: Xerophyte (Nerium leaf); Hydrophyte (Hydrilla stem).</p> <p>19. Structure of anther (young and mature).</p> <p>20. Types of ovules: anatropous, orthotropous, circinotropous, amphitropous/campylotropous</p> <p>21. Female gametophyte: Polygonum (monosporic) type of Embryo sac (Permanent slides/photographs).</p> <p>22. Pollination types and seed dispersal mechanisms (including appendages, aril,caruncle) Photographs/specimens).</p> <p>23. Dissection of embryo/endosperm from developing seeds.</p> <p>24. Calculation of percentage of germinated pollen in a given medium</p>		
EVEN SEMESTER						
1.	32161201	Molecular Biology Theory	Core	Unit 2 Unit 7 Unit 8	4 Jan 15 Feb 15 March	8 Feb 8 March 8 April
2.	32167608	Bioinformatics Theory	DSE	Unit 4 Unit 5 Unit 6 Unit 3	3 Jan 7 Feb 3 March 4 April	3 feb 28 Feb 31 March 12 April

3.	42164401	Plant Physiology And Metabolism	Core	Unit 1 Unit 4 Unit 5	5 Jan 9 Feb 16 March	2 Feb 9 March 30 March
7.	42167904	Analytical Techniques in Plant Sciences	DSE	14. Study of Blotting techniques: Southern, Northern and Western, DNA fingerprinting, DNA sequencing, PCR through photographs. 15. Demonstration of ELISA. 16. 3. To separate nitrogenous bases by paper chromatography. 4. To separate sugars by thin layer chromatography. 5. Isolation of chloroplasts by differential centrifugation. 6. To separate chloroplast pigments by column chromatography. 7. To estimate protein concentration through Lowry's methods. 8. To separate proteins using PAGE. 9. To separation DNA (marker) using AGE. 10. Study of different microscopic techniques using photographs/micrographs (freeze fracture, freeze etching, negative staining, positive staining, fluorescence and FISH). 11. Preparation of permanent slides (double staining). Effect of auxins on rooting. 17. Suction due to transpiration. 18. Hydroponics (using a photograph). 19. To demonstrate the delay of senescence by cytokinins. 20. To study the phenomenon of seed germination (effect of light and darkness)	7 Jan	8 April
5.	32167608	Bioinformatics Practical	DSE	6. Nucleic acid and protein databases. 7. Sequence retrieval from databases. 8. Sequence alignment.	5 Jan	13 April

				9. Sequence homology and Gene annotation. 10. Construction of phylogenetic tree.		
6.	32161601	Plant Metabolism Practical	Core	12. Chemical separation of photosynthetic pigments. 13. Experimental demonstration of Hill's reaction. 14. To study the effect of light intensity on the rate of photosynthesis. 15. Effect of carbon dioxide on the rate of photosynthesis. 16. To compare the rate of respiration in different parts of a plant. 17. To demonstrate activity of Nitrate Reductase in germinating leaves of different plant sources. 18. To study the activity of lipases in germinating oilseeds and demonstrate mobilization of lipids during germination. 19. Demonstration of fluorescence by isolated chlorophyll pigments. 20. Demonstration of absorption spectrum of photosynthetic pigments 21. Determination of RQ 22. To demonstrate activity of Lipase	3 Jan	11 April

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

Event Topic	National Workshop on Biomedical Research Methods
Type / Nature (FDP/Webinar/Workshop etc.)	Workshop
Organizing In-charge	Vallabhbai Patel Chest Institute (VPCI), University of Delhi
Details regarding invited Resource Person	--

Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	2 September – 5 September	Timing/s	10 to 5	Mode	OnlineLecture

Event Topic	Nanomedicine: Biomolecules for Human Health (NBHH-2021): Small Molecules, Big Opportunities				
Type / Nature (FDP/Webinar/Workshop etc.)	Workshop				
Organizing In-charge	Kirori Mal College under the aegis of DBT Star College Scheme.				
Details regarding invited Resource Person	-				
Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	29 September 2022	Timing/s	11 – 4pm	Mode	Online Lecture

Event Topic	Nanomedicine: Biomolecules for Human Health (NBHH-2021): Small Molecules, Big Opportunities				
Type / Nature (FDP/Webinar/Workshop etc.)	Conference				
Organizing In-charge	Kirori Mal College under the aegis of DBT Star College Scheme.				
Details regarding invited Resource Person	-				
Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	27-28 Sept 2022	Timing/s	11 – 5.30 pm	Mode	Online Lecture

Event Topic	Insect And Plant Biology: 2021				
Type / Nature (FDP/Webinar/Workshop etc.)	Conference				

Organizing In-charge		Mahatma Hansraj Faculty Development Centre, Hansraj College			
Details regarding invited Resource Person					
Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	7-8 Oct 2022	Timing/s	11- 5pm	Mode	Online Lectures

Event Topic		Advanced Concepts in Developing MOOCS			
Type / Nature (FDP/Webinar/Workshop etc.)		Refresher course			
Organizing In-charge		Teaching Learning Centre, Ramanujan College, University of Delhi under the a Ministry of Education, Pandit Madan Mohan Malaviya National Mission on teache teaching.			
Details regarding invited Resource Person		-			
Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	6 -20 October 2021	Timing/s	2 hrs/day	Mode	Online Lectures

C. 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
556	B.Sc.(H) Botany	3216301	Anatomy of Angiosperms	Test 1 November Assignment 6 September	Test 15 Nov Assignment 15 Nov
556	B.Sc.(H) Botany	32167502	Biostatistics	Test 27September Assignment 16 October	Test 22 November Assignment 23 November
583	B.Sc.(LS) Botany	42164301	Plant Anatomy and Embryology	Test 29 September Assignment 24 November	Test 8 September Assignment 24 November
556	B.Sc.(H) Botany	32161201	Molecular Biology	Test 12April Assignment 22 February	Test 19 April Assignment 19 April
583	B.Sc.(LS)	42164401	Plant Physiology and Metabolism	Test 6 March Assignment 2 March	Test 13 April Assignment 20 April
556	B.Sc.(H) Botany	32167608	Bioinformatics	Test 31 Jan, 18 April Assignment 7 February	Test 21 April Assignment 4 April

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

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