

Semester Lecture Plan (Theory)

Name of the college: Government College of Arts, Science and Commerce, Sanquelim							
Name of Faculty: Dr. Tanvi Nitin Prabhu		Subject: Botany					
Paper code: BOT 200		Program/Course: B.Sc (Botany)		Division: A			
Academic Year: 2026-27		Semester: III		Total Lectures: 45			
Course Objectives: 1. Familiarize students with diverse groups of microbes and non-flowering plants. 2. Provide the ability to identify and classify microbes and non-flowering plant groups. 3. Impart knowledge of the morphology, life cycle, reproduction and economic importance of various microbes and non-flowering plants.							
Expected Course Outcome: On completion of the course, students will be able to: 1. Identify and classify microbes and non-flowering plants based on their characteristic features. 2. Compare and contrast the morphological features within and between the groups for a comprehensive understanding of the basis of their classification. 3. Examine the life cycle and methods of reproduction of microbes and non-flowering plant groups. 4. Appraise the economic importance of microbes and non-flowering plants.							
Student Learning Outcome: On completion of the course, students will be able to: 1. Identify and classify microbes and non-flowering plants based on their characteristic features. 2. Compare and contrast the morphological features within and between the groups for a comprehensive understanding of the basis of their classification. 3. Examine the life cycle and methods of reproduction of microbes and non-flowering plant groups. 4. Appraise the economic importance of microbes and non-flowering plants.							
Month	Lectures		No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
	From:	To:					

June 2026	24.06.2026	27.06.2026	01	Introduction to BOT 200		Chalk and board/PPT	
June 2026- July 2026	29.06.2026	04.07.2026	03	General structure, characteristics, origin and evolution of viruses			Pandey, BP (2017). Botany for Degree Students: Biodiversity. S. Chand and Company Ltd., New Delhi.
				Major groups (DNA viruses, RNA viruses and retroviruses)			
				General account of replication of viruses			
July 2026	06.07.2026	11.07.2026	03	Characteristics of virus-like particles (viroids, virusoids and prions)		Chalk and board/PPT	
				General characteristics of eubacteria and archaebacteria			
July 2026	13.07.2026	18.07.2026	03	Shapes and arrangement of bacteria; ultrastructure of bacterial cell		Chalk and board/PPT	
				Cell structure and morphology of cyanobacteria			
				Reproduction in bacteria			
July 2026	20.07.2026	25.07.2026	03	Conjugation, transformation and transduction		Chalk and board/PPT	
				Economic importance of bacteria			
				General characteristics of Fungi			
July 2026 – August 2026	27.07.2026	01.08.2026	03	Ainsworth's classification of Fungi		Chalk and board/PPT	Vashishta, BR and Sinha, AK (2014). Botany for Degree Students: Fungi. S. Chand and Company Pvt. Ltd., New Delhi.
				Morphological features of <i>Mucor</i> , <i>Aspergillus</i> , <i>Agaricus</i> and <i>Saccharomyces</i>			
				ISA 01 (Assignment)			
August 2026	03.08.2026	08.08.2026	03	Morphological features of <i>Mucor</i> , <i>Aspergillus</i> , <i>Agaricus</i> and <i>Saccharomyces</i>		Chalk and board/PPT	
				Reproduction (asexual, sexual and parasexual) in Fungi			

				Ecological and economic importance of fungi			
August 2026	10.08.2026	15.08.2026	03	General characteristics, types and significance of symbiotic fungal associations (lichens and mycorrhizae)		Chalk and board/PPT	
				General characteristics, types and significance of symbiotic fungal associations (lichens and mycorrhizae)			
				General characteristics of Algae			
August 2026	17.08.2026	22.08.2026	03	Range of thallus structure		Chalk and board/PPT	
				Life cycle patterns (haplontic, diplontic, isomorphic, heteromorphic, haplobiontic and diplobiontic).			
				Life cycle patterns (haplontic, diplontic, isomorphic, heteromorphic, haplobiontic and diplobiontic).			
August 2026	24.08.2026	29.08.2026	03	ISA 02 (Test)			
				Methods of reproduction in Algae			
				Morphological features of <i>Nostoc</i> , <i>Spirogyra</i> , <i>Sargassum</i> and <i>Polysiphonia</i> ; ecological and economic importance.			
August 2026 - September 2026	31.08.2026	05.09.2026	03	Morphological features of <i>Nostoc</i> , <i>Spirogyra</i> , <i>Sargassum</i> and <i>Polysiphonia</i> ; ecological and economic importance.		Chalk and board/PPT	
				Morphological features of <i>Nostoc</i> , <i>Spirogyra</i> , <i>Sargassum</i> and <i>Polysiphonia</i> ; ecological and economic importance.			
				General characteristics; Smith's classification of Bryophytes			
September 2026	07.09.2026	12.09.2026	03	Methods of reproduction in Bryophytes		Chalk and board/PPT	
				Morphological features of <i>Riccia</i> , <i>Anthoceros</i> and <i>Funaria</i>			
				Morphological features of <i>Riccia</i> , <i>Anthoceros</i> and <i>Funaria</i> : Economic importance			
September 2026	14.09.2026	19.09.2026	00	Ganesh Chaturthi Break			

September 2026	21.09.2026	26.09.2026	03	General characteristics; Smith’s classification; alternation of generations; morphology of early land plants (Cooksonia and Rhynia);		Chalk and board/PPT	Vashishta, PC, Sinha, AK and Kumar, A (2010). Botany for Degree Students: Pteridophyta. S. Chand and Company Pvt. Ltd., New Delhi.
				morphological features and reproductive structures of <i>Psilotum</i> , <i>Selaginella</i> , <i>Equisetum</i> and <i>Pteris</i> ,			
				Economic importance of Pteridophyta			
September 2026-October 2026	28.09.2026	03.10.2026	03	Heterospory and seed habit; stelar evolution		Chalk and board/PPT	Bhatnagar, SP and Moitra, A (1996). Gymnosperms. New Age International (P.) Ltd., New Delhi.
				ISA 03			
				General characteristics and life cycle of Gymnosperms;			
October 2026	05.10.2026	10.10.2026	03	Coulter and Chamberlain’s classification of Gymnosperms		Chalk and board/PPT	
				Morphological features and reproductive structures of <i>Cycas</i> , <i>Pinus</i> and <i>Gnetum</i>			
				Morphological features and reproductive structures of <i>Cycas</i> , <i>Pinus</i> and <i>Gnetum</i>			
October 2026	12.10.2026	14.10.2026	02	Ecological and economic importance of gymnosperms		Chalk and board/PPT	
				Revision			

Assessment Rubrics

Component	Max Marks
ISA 1	7.5
ISA 2	7.5
ISA 3	7.5
Practical	25
Project	NA
Semester End Exam	60