

Institute of education and Research
Science Education
University of the Punjab, Lahore
 Course Outline



Programme	BSSEd	Course Code	SE-306L	Credit Hours	1
Course Title	Botany-II Lab (Plant Systematic and Anatomy and development theory)				
Course Introduction					
The course is organized to provide an introduction to plant taxonomy, history of classification introduction to nomenclature and International Code. It also includes morphological Study of plant families, anatomical study of cell wall and the Internal Structure (Tissues) of the Plant Body.					
Learning Outcomes					
On the completion of the course, the students will: 1. Learn the history of Plant systematics and its role in classification 2. Make use of this knowledge for the identification and grouping of different plants.					
Course Content				Assignments/Readings	
Week 1	1.Identification of Families with the help of keys			Practical copy preparation	
	Introduction and performance			Practical copy preparation	
Week 2	1.Identification of Families with the help of keys			Practical copy preparation	
	Results and discussion			Practical copy preparation	
Week 3	2.Description of Flowers (in technical terms) of following Families			Practical copy preparation	
	Introduction and performance			Practical copy preparation	
Week 4	2.Description of Flowers (in technical terms) of following Families			Practical copy preparation	
	Results and discussion			Practical copy preparation	

Week 5	3.Ranunculaceae, Brassicaceae, Fabaceae, Rosaceae, Euphorbiaceae, Cucurbitaceae, Solanaceae, Lamiaceae, Apiaceae, Asteraceae, Liliaceae and Poaceae.	Practical copy preparation
	Introduction and performance	Practical copy preparation
Week 6	3.Ranunculaceae, Brassicaceae, Fabaceae, Rosaceae, Euphorbiaceae, Cucurbitaceae, Solanaceae, Lamiaceae, Apiaceae, Asteraceae, Liliaceae and Poaceae.	Practical copy preparation
	Results and discussion	Practical copy preparation
Week 7	4.Field tours shall be undertaken to study and collect local plants.	Practical copy preparation
	Introduction and performance	Practical copy preparation
Week 8	4.Field tours shall be undertaken to study and collect local plants.	Practical copy preparation
	Results and discussion	Practical copy preparation
Week 9	5.Students are required to submit Forty (40) fully identified herbarium specimens.	Practical copy preparation
	Introduction and performance	Practical copy preparation
Week 10	5.Students are required to submit Forty (40) fully identified herbarium specimens.	Practical copy preparation
	Results and discussion	Practical copy preparation
Week 11	6.Study of Epidermis, Stomata and Trichomes.	Practical copy preparation
	Introduction and performance	Practical copy preparation
Week 12	6.Study of Epidermis, Stomata and Trichomes.	Practical copy preparation
	Results and discussion	Practical copy preparation

Week 13	7.Study of Simple Tissues from fresh material and prepared slides as well. Study of Complex Tissues (Xylem), Maceration and Study of Xylem from Macerated Material.	Practical copy preparation
	Introduction and performance	Practical copy preparation
Week 14	7.Study of Simple Tissues from fresh material and prepared slides as well. Study of Complex Tissues (Xylem), Maceration and Study of Xylem from Macerated Material.	Practical copy preparation
	Results and discussion	Practical copy preparation
Week 15	8.Make a Transverse Section of Stem and Leaf of Angiosperm.	Practical copy preparation
	Introduction and performance	Practical copy preparation
Week 16	8.Make a Transverse Section of Stem and Leaf of Angiosperm.	Practical copy preparation
	Results and discussion	

Reading Material	
Material will be provided by the teacher.	
Teaching Learning Strategies	
1. Laboratory Work 2. Group Work	
Assignments: Types and Number with Calendar	
1. Quiz 2. Presentation 3. Written Test 4. Class discussion	

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes: Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.