

BOT 521 Advanced Plant Taxonomy

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COURSE INFORMATION

Course Description:

This course covers advanced topics and flowering plant taxonomy (Principles of plant taxonomy, plant identification, nomenclature and classification, different sources of taxonomic evidences, and tools and techniques of Molecular Taxonomy)

Student Learning Outcomes:

- Understanding of different components of Flowering Plant Taxonomy viz., Plant collection, Preservation, Documentation, Plant Structure, Taxonomic Identification, Plant Nomenclature, Plant Taxonomic Classification, Taxonomic evidences / Source of data (Morphology, Anatomy, Embryology, palynology, Micromorphology, Chemistry, DNA etc. in relation to plant taxonomy.
- Gathering information and data analysis.
- Express opinions and criticize peers.
- Bear responsibility and cope with positive and negative criticism from others.

COURSE REQUIREMENTS

Exams: Midterm and Final Exam

Project: Plant Collection and Classification

COURSE distribution

#	day and date	The lecture title	
1.		Introduction; history and significance of Plant Systematic. مقدمة, تاريخ وأهمية تصنيف النبات	
2.		Introduction to phylogenetics Discussion: systematic and genetic data مقدمة في علم الوراثة العرقي مناقشة: الأنظمة والبيانات الوراثية	
3.		Classification and naming Discussion: classification تصنيف وتسمية مناقشة: التقسيم	
4.		Methods I - morphology, anatomy, development طرق التقسيم 1: الخصائص المورفولوجية, علم التشريح, التطور	

5.		half-semester Test	
6.		Methods II - pollen, secondary and chemistry, cytotaxonomy. Discussion: the evolution of chromosomes, polyploidy Chromosome counts طرق التقسيم 2 - حبوب اللقاح , التقسيم الكيميائي، الوراثي مناقشة: تطور الكروموسومات، التعدد الكروموسومي	
7.		Third ways - DNA Discussion: appropriate techniques طرق التقسيم 3 - الحمض النووي مناقشة: التقنيات الملائمة	
8.		Phylogenetic inference النشوء والتطور	
9.		Taxonomy of some Plant تصنيف نباتات (عملي)	
10.		Taxonomy of some Plant تصنيف نباتات (عملي)	
11.		Taxonomy of some Plant تصنيف نباتات (عملي)	
Distribution of grades			
half-semester Test		30	
Final exam		40	
Practical		30	
Total		100	