



**DEPARTMENT OF BOTANY**  
**Tentative Course Plan**

**Class:**

**Semester-**

**Session:**

<b>Instructor</b>	Hira Khan	<b>Email:</b> Hirafazal1444 @gmail.com	
<b>Course Title</b>	Diversity of Vascular Plants	<b>Program</b>	BS (5 <sup>TH</sup> Semester)
<b>Course Number</b>	BOTA-01502	<b>Credit Hours</b>	3(2+1)

**Lecture** .....day: ..... period (00:00a.m to 00: 00a.m), Room# 00

**Course Objective:**

**Methods of Teaching**

- Assigned readings
- Group activities & Discussion
- Audiovisual aids lectures
- Web-assisted instruction
- Student-Directed Teaching

<b>Resource Material</b>	<b>1. Text Books</b>			
	i. Sabeeha, S.M., Winslow, R. B., Ort, D. 2011. Annual Review of Plant Biology 2011. Annual Reviews.			
	ii. Shnoonhoven, L. M., van Loon J. J. A., Marcel, D.2009. Isect-plant biology. Oxford University Press			
	iii. Carvan's text book of botany, paper A.			
	<b>2.Reference Books</b>		<b>3.Research Papers</b>	
i	Thomas, N.T., Edith,L.T., Krings,M. 2009.Paleo Botany: The Biology and Evolution of Fossil Plants, 2 <sup>nd</sup> Edition. Academic Press, USA	i		
ii		ii		
<b>4.Hot Research Papers</b>		<b>5.Web Resources</b>		
i		i		
ii		ii		

**Office Help Hours**

**Grading**  
Exam (Date to be announced)  
Mid- Exam (30%) Final Exam (50%)  
Problem Session/Assignments (20%)

**Problem Session** .....day: 00 and 00 periods (0:00-00:00am), Room# 00

**SEQUENCE OF TOPICS TO BE COVERED**

Lecturer #	Topics (outline of main topics and sub topics)	Chapter #	Tutorial /Laboratory
1	Introductory Lecture to the Subject		
2	Introduction, Origin, History and features of Pteridophytes.	Pteridophytes.	Study of the morphology and reproductive features of available genera of Angiosperms
3	Generalized life cycle of Pteridophytes	Pteridophytes.	
4	Method of Fossilization & Types of fossils	Fossils and Fossilization	
5	Geological time scale and Importance of Paleobotany	Paleobotany	Study the morphology and reproductive features of available gymnosperms
6	First vascular plant Rhyniophyta (e.g)Cooksonia		
7	General Characters Classifications and affinities of Psilopsida		
8	Comparitive account of evolutionary trends of Psilopsida (Psilotum)		Collection of local Angiosperms plants.
9	General characters, classification and affinities of Lycopsida		
10	Comparitive account of evolutionary trend of Lycopsida (Locopodium, salaginella)		

11	General characters, classification and affinities of sphenopriede		
12	Comparitive account of evolutionary trends of sphenopriede.(equisetum)		Collection of local gymnosperms plants.
13	General characters, classification and affinities of pteropsida (Adiantum, Marsilea).		
14	Comparitive account of evolutionary trends of pteropsida (Adiantum, Marsilea).		
15	Origin and Evolution of Seed Habit		
16	Geological history, and Distribution of Gymnosperms		
	<b>Mid Term Exam</b>	Course/Discussion from session 1 to 16	
17	Origin and Morphology of Gymnosperms.		
18	Anatomy and classification of Gymnosperms		
19	Affinities of cycadofilicales and Ginkgoales		
20	Affinities of cycadales and Gnetales		
21	Distribution of Gymnosperms in Pakistan		
22	Economic Importance of Gymnosperms		
23	An Introduction to theGondwana flora of the world		
24	Origin and General Characteristics of Angiosperms		
25	Importance of Angiosperms		-
26	Life cycle of Angiosperms		-
27	An Introduction of Neoplanology		-
28	An Introduction of Paleopolynology		-
29	Application of Neoplanology in Botany, Geology, Archology, Criminology, Medicines, Honey and Oil and Gas Exploration		-
30	Application of Neoplanology in Criminology, Medicines, Honey and Oil and Gas Exploration		
31	Application of Paleopalynology in Botany, Geology, Archeology		
32	Application of Paleopalynology in Criminology, Medicines, Honey, Oil, and Gas Exploration		
	<b>Final Term Exam</b>	Course/Discussion from session 1- 32	

#### **Student Evaluation criteria:**

Attendance	5%
Workshop / Assignments/Case study	5%
Surprise Test/Sudden Test , Quizzes	5%
Class Participation	5%
Mid Term Paper	30%
Final Term paper	50%
<b>Total</b>	<b>100%</b>

#### **Student Responsibilities:**

Students must attend class. Failure to attend class may result in failure in the course. Students must also arrive on time and remain in class for the entire period. Cellular Phones and Beeper must be Turned off (Proper classroom decorum [behavior] adopts, Course outlines and calendars explain requirements and assignments, students are responsible for knowing what they say. Students are also responsible for doing all assigned work on time. Excessive absences (more than 03) will result in "F Grade". Students may prepare Sketchbook for taking notes and for references.

Instructor / Tutor

Approved by:

Chairman