Course Specification
(Bachelor)

Course Title:	Plant Taxonomy
Course Code:	BIOL 222
Program:	Biology
Department:	Biology
College:	College of Science
Institution:	Majmaah University
Version:	3 rd
Last Revision Date:	1/3/1444

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: 2 (2+0)					
Equivalent to ECTS Credits = 3					
2. Course type					
A.	☐University	☐College	☐Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered (3 / second year)					
4. Course General Description:					
This course provides a comprehensive introduction to the principles of plant taxonomy and classification. It covers the fundamental characteristics and classification of major plant groups, including Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms. The curriculum explores the history of plant taxonomy and the diverse classification systems developed by key scientists. A central component of the course is the development of practical skills for identifying unknown plants and gaining knowledge about the flora of regional ecosystems.					
5. Pre-requirements for this course (if any)**:**					
Plant Anatomy and Morphology **BIOl121**					
6. Co-requisites for this course (if any)**:**					
7. Course Main Objective(s):					
• The main objective of plant taxonomy is to classify all types of plants on the earth and their applications					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	75%
2	E-learning	10	25%
3	Hybrid • Traditional classroom • E-learning		

No	Mode of Instruction	Contact Hours	Percentage
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		30

Workload (based on academic semester)

No	Activity	Work load (In hours)
1.	**Contact hrs**	30
2.	**Self –study hours or Academic learning hours (Assignments, quizzes, reports, discussions, library , research….)**	30
Total Workload		60
Equivalent to ECTS Credit Pionts		3

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Recognize the basic knowledge of various classification types of plants	**K1**	Lectures, Group discussion	Quizzes, Midterm and final exams Electronic ex
1.2	Outlining the different plant families and their Characteristics with an examples	**K1**	Lectures, Group discussion	Quizzes, Midterm and final exams Electronic ex
…				

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
2.0				
2.1	Demonstrate the life cycle of Vascular and nonvascular plants	**S1**	Lectures, Videos, Group discussion,	Short answer, Fill in the blanks, Diagram
2.2	Predict the name of plant family by verifying leaf, flower, seed structures	**S1**	Lectures, Brain storming Group discussion	Short answer, Fill in the blanks, Diagram
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3.0	**Values, autonomy, and responsibility**			
3.1	Exhibit ethical and professional responsibilities to scientific problems related to Plant taxonomy	V1	Team work Reports	Assignment submission, Oral presentation
3.2				
...				

C. Course Content

No	List of Topics	Contact Hours
1.	Taxonomy – Introduction, Basic principles, History and development of taxonomy, Terminologies 2	2
2.	Binomial nomenclature & Carolus Linnaeus System of plant classification; Introduction to Botanical nomenclature, International code of botanical nomenclature 2	2
3.	Plant classification and naming –Classical (alpha α), beta (β), gamma (γ) and omega (Ω); Bentham & Hooker's System of Classification, Engler and Prantl system of classification, Bessey system of plant classification; Modified Bessian Classification – Modern phylogenic systems of plant classification	2
4.	Classification of Non vascular Plants - Bryophytes (mosses) – Example of three division, liverworts, hornworts and Moss.	4
5.	Classification of spore producing vascular plants – Pteridophytes and its sub – division.	4
6.	Classification of Gymnosperms – Living divisions – Example with one family	4
7.	Classification of Angiosperms: Monocotyledons, Dicotyledons; example of different families.	8
8.	Flora of Saudi Arabia, Identification of plant families – Herbarium and uses	4
		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Home work/Group project	every week	10
2.	Quiz, Oral Presentations	5th& 9th	10
3.	Mid exam I	7th & 8th	15
4.	Mid exam II	11th & 12th	15
٥.	E. Exam	11th 12th Week	10
6.	Final Exam	18 Weeks	40
			100

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Short notes on **Plant Taxonomy,** Dr. Vijayakumar – Note book, Majmaah University
Supportive References	• Plant taxonomy -Sharma OP -The Mc Graw Hill companies (2009) ISBN (13): 978-0-07-014159-9 • Taxonomy of Angiosperms V. Kumaresan, Annie Ragland; Saras Publications, Bioscience book publisher (2012) ISBN 9789382459668 • Textbook of Botany_Part3; V. Kumaresan, Annie Ragland- Saras Publications, Bioscience book publisher (2010) ISBN 9789384826918 • Plant Systematics: A Phylogenetic Approach - Judd, W.S., Campbell, C.S., Kellogg, E.A., Stevens, P.F. - Sinauer Associates, Inc. (2016) ISBN 9781605353890 • Plant Taxonomy and Biosystematics - Stace, Clive A. - Cambridge University Press (2009) ISBN 9780521427852 • Flowering Plant Families of the World - Heywood, V.H., Brummitt, R.K., Culham, A., Seberg, O. - Firefly Books (2007) ISBN 9781554072064
Electronic Materials	• The Plant List - http://www.theplantlist.org/ • Taxonomy https://www.ncbi.nlm.nih.gov/taxonomy
Other Learning Materials	Electronic materials of Lecture notes and PowerPoints available in 'Black board' database

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom and fully equipped laboratory facilities are available
Technology equipment (projector, smart board, software)	E-podium and smart board facilities are available
Other equipment (depending on the nature of the specialty)	Nil

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Direct assessment
Effectiveness of Students assessment	Program Leader	Direct assessment
Quality of learning resources	Students	Indirect assessment
The extent to which CLOs have been achieved	Faculty	Direct assessment
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**BIOLOGY DEPARTMENT**
REFERENCE NO.	**7**
DATE	4/4/1446 [07/10/2024