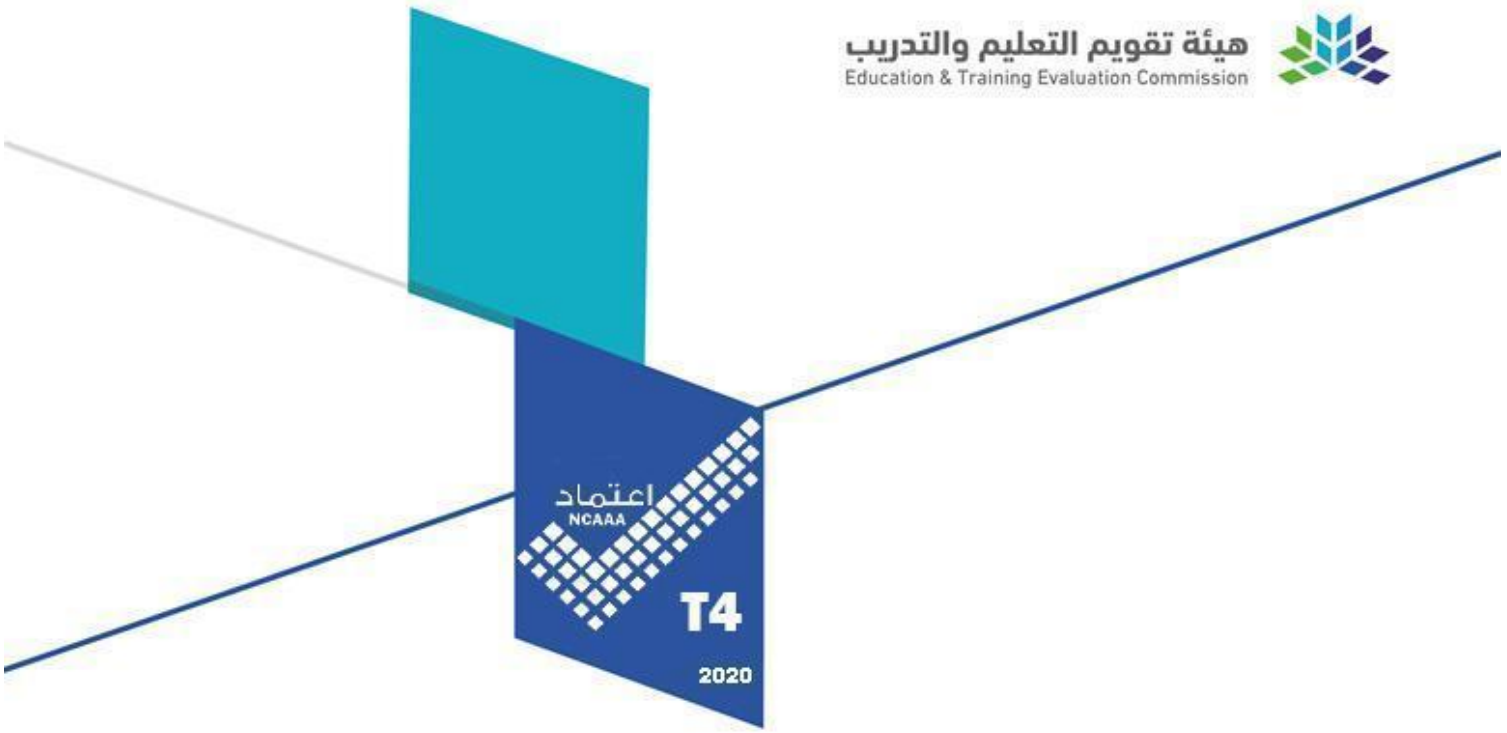
هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission



Course Specifications

Course Title:	**Flora of KSA**
Course Code:	**BIO348**
Program:	**Bachelor of Science in Biology**
Department:	**Department of Biology**
College:	**Faculty of Science**
Institution:	**University of Tabuk**

Table of Contents

A. Course Identification

1. Credit hours:	**3 (2 Theoretical + 1 Practical) hours**
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	**Level 6/ Second semester/ Third year**
4. Pre-requisites for this course (if any)**: General Botany (BIO241)**	
5. Co-requisites for this course (if any)**: None**	

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	2	50%
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Laboratory**	2	50%

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	26
2	**Laboratory/Studio**	26
3	**Tutorial**	
4	**Others** (specify)	
	Total	**52**

B. Course Objectives and Learning Outcomes

1. Course Description

- This course includes introduction to Flora, principles and evolutionary trends in taxonomy, Herbarium essentials, Plant conservation in Kingdom of Saudi Arabia, history of plant classification and nomenclature, plant taxonomic terms, plant diversity in the flora of Kingdom of Saudi Arabia and taxonomic study of important dicot and monocot families.

2. Course Main Objective

- Understanding information of plant biodiversity in Saudi Arabia, in terms of endemic, endangered and rare plants, number and distribution of plant species in the Kingdom and with special reference to Tabuk.
- Explaining the topography and vegetation of different regions of Saudi Arabia.
- Describing how to collect and preserve plant specimens and prepare herbarium sheets.
- Identifying plant species of different regions of Saudi Arabia.
- Understanding the different ecotypes of Saudi Arabia.
- Identifying the basic features of some important dicots and monocots families.
- Comparing the phytogeography of Saudi Arabia.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	To recognize the information on flora, geographic context and various ecosystems.	K1
1.2	To list the taxonomic study of major plant families of Saudi Arabia.	K2
2	**Skills :**	
2.1	To differentiate between different floral families.	S1
2.2	To prepare the herbarium of different wild floral species (monocot & dicot).	S1
2.3	To apply identification techniques on different wild plants in Saudi Arabia.	S3
3ing	**Values:**	
3.1	To work in a team and independently to conduct a specific project.	V1
3.2	To show ethical behavior in collection, drying and preservation of plant species in scientific ways.	V2

C. Course Content

1- Theoretical Part:

No	List of Theoretical Topics	Contact Hours
1	Introduction to Flora: Objectives, Principles	2
2	Introduction to Flora: Evolutionary trends in taxonomy	2
3	Herbarium essential-1	2
4	Herbarium essential-2	2
5	Herbarium essential-3	2
6	Herbarium essential-4	2
7	Plant conservation in Kingdom of Saudi Arabia (Botanical Survey, Botanic gardens, Botanical museum and Herbarium)	2
	Mid Term exam	
8	History of Plant Classification	2
9	Plant Nomenclature	2
10	Plant diversity in the flora of Kingdom of Saudi Arabia-1	2
11	Plant diversity in the flora of Kingdom of Saudi Arabia-2	2
12	Taxonomic study of important dicot families.	2
13	Taxonomic study of important monocot families and Revision	2
	Final Exam	
Total		**26**

1- Practical Part:

No	List of Practical Topics	Contact Hours
1	Introduction to Flora, Study Tools of Plant Taxonomy and Essential Tools of Herbarium	2

2	Study King Abdullah International Gardens, Riyadh	2
3	Study herbarium sheets, plant collection , drying, Pressing, and processing of herbarium	2
4	Study method of plant identification	2
5	Study method of plant identification	2
6	Study the inflorescence and structure of flower for plant	2
7	Study Flora of Saudi Arabia website maintained by King Saud University, Riyadh, KSA	2
	Mid Term exam	
8	Identify the ethnobotanical aspects of Flora of Saudi Arabia	2
9	Study invasive plant species of KSA	2
10	Study the endemic plant species of KSA	2
11	Submission of herbarium sheet of a woody and herbaceous plant	2
12	Plant diversity in the flora of Kingdom of Saudi Arabia	2
13	Plant diversity in the flora of Kingdom of Saudi Arabia	2
	Final Exam	2
Total		**26**

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	To recognize the information on flora, geographic context and various ecosystems	- Lectures - Case study and articles - Activities and homework. -	- Periodic exams - Final exams. - Quizzes - Homework
1.2	To list the taxonomic study of major plant families of Saudi Arabia.		
2.0	**Skills**		
2.1	To differentiate between different plant families.	- Lecture - Individual and small group tasks. - Short essay - Lab demonstration, dissection and drawing skills - Individual presentation and working as a part of group	- Assessment of lab reports and practical examination - Individual and group presentation - Case study - Demonstration through charts and posters - Periodic exams - Final exams
2.2	To prepare the herbarium of different plant species (monocot – dicot).		
2.3	To apply identification techniques on different wild plants in Saudi Arabia.		
3.0	**Values**		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.1	-To Work in a team and independently to conduct a specific project.	- Essay writing - Lab demonstration - Individual & group presentation	- Oral and written scientific report - Interactive discussion and participation - Work in groups
3.2	- To show ethical behavior in collection, drying and preservation of plant species in scientific ways.		
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2. Assessment Tasks for Students

#	*Assessment task	Week Due	Percentage of Total Assessment Score
1	Quizzes + Assignments + Class discussion	1-13	10%
2	Midterm Theoretical Exam	8	25%
3	Midterm Practical Exam	8	10%
4	Final Practical Exam	14	15%
5	Final Theoretical Exam	15	40%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- Office hours 6 hr/ week at least.
- Academic Guidance for about 30 students as determined by admission and registration.
- Direct supervision of staff for lab works.
- Electronic communication through blackboard and email

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	- Flora of Saudi Arabia volumes 1, 2, 3, & 4 Published by King Saud University Libraries. - Flora of the Arabian Peninsula and Socotra: Professor Anthony G Miller, Anthony G. Miller Thomas A. Cope, Professor J A Nyberg; Edinburgh University Press, 1996 - Flora of the Kingdom of Saudi Arabia, Volume 2, Part 2 By (Shaukat Ali Chaudhary),
Essential References Materials	- *Flora.* - *Plant Diversity in desert Ecosystem.* - *Physiologia Plantarum.* - *- Science.*
Electronic Materials	- http://plantdiversityofsaudiarabia.info/index.htm http://sciences.ksu.edu.sa/plant/page/222 - www.plantbiodiversity.com - www.nature.com
Other Learning Materials	- NTSYS pc program, for numerical taxonomy system, Version 2.2.

2. Facilities Required

Item	Resources
Accommodation Classrooms, laboratories, demonstration) (.rooms/labs, etc	- A sufficient number of classrooms to accommodate students - Well-equipped practical laboratories to accommodate students - Virtual session provided by the blackboard (which allow discussion and sharing PowerPoint and videos.
Technology Resources AV, data show, Smart Board, software,) (.etc	- Data show - Wireless connection in the building for students and faculties.
Other Resources Specify, e.g. if specific laboratory) equipment is required, list requirements or (attach a list	- Herbarium sheets (41.9 x 26.7cm) 100gm. - Geological Hammer – Vasculum – Digger-Trowel - Pruning Knife - Shear - Herbarium wooden frame for Specimens pressed. - Secateurs Vine-S. - Secateurs Comfort. - Plastic tape -Plastic or paper bag. - Specimen Bottle-Herbarium Boxes-Files for preservation of herbarium - Cupboards for preserving herbarium - Dichotomous key for plant classification - Maps for Saudi Arabia

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
- Effectiveness of teaching and assessment.	- Students.	Indirect - Questionnaires.
- The extent of achieving the course learning outcomes.	- Program committee. - Staff members. - Students.	-Direct - Questionnaires. - Reports. - Meetings
- Quality of learning resources.	- Program leaders. - Peer Reviewer.	-Direct & Indirect - Questionnaires. - Reports. - Meetings

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Biology Department Council
Reference No.	
Date	1/6/2022