



Course Specification

— (Bachelor)

Course Title: Pharmacognosy-II

Course Code: PHGN 322

Program: Pharmaceutical sciences

Department: Pharmacognosy

College: Pharmacy

Institution: Najran University

Version: 4

Last Revision Date: 18-08-2024

Table of Contents

A. General information about the course:	3
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods	4
C. Course Content	5
D. Students Assessment Activities	6
E. Learning Resources and Facilities	7
F. Assessment of Course Quality	7
G. Specification Approval	7



A. General information about the course:

1. Course Identification

1. Credit hours: (3h (2+1))

2. Course type

A. ☐ University ☐ College ☐ Department ☐ Track ☒ Program
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (6th / 3rd)

4. Course general Description:

This course aims at a virtual study of both seeds, fruits, roots and medicinal herbs, and includes a microscopic study to identify them and know their quality, purity and usability, as well as to know and examine the active substances contained in these parts and how to detect them, and therapeutic applications for these parts of natural plants.

5. Pre-requirements for this course (if any):

PHGN 321

6. Co-requisites for this course (if any):

7. Course Main Objective(s):

- Study of the general features of the macroscopic and microscopic characters of the seeds, fruits, roots, rhizomes and herbs and how to differentiate between the different plant organs.
- Know the characteristic elements of each plant under study
- know the active constituents of each plant under study
- Know the biological effects for each plant under study and how to employ alone or in combination of conventional drugs for solving human health problem.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 		
4	Distance learning		



3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	30
3.	Field	0
4.	Tutorial	0
5.	Others (specify)	0
Total		60

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

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Identify the macroscopic and microscopic features of different organs of the natural drugs.	K1	Lectures	Written Exams and assignments
1.2	Recognize the pharmacological uses of several common natural seeds, fruits, roots, rhizomes, and herb.	K1	Lectures	Written Exams and assignments
2.0	Skills			
2.1	Differentiate between medicinal plants based on morphological and microscopical characters.	S2	Lectures	Written Exams
2.2	- Design recipe from safe single or multiple medicinal plants to overcome or ameliorate some health problems.	S2	Lab. work	Practical exams Report
2.3	Employ the plants under study alone or in	S2	Lectures	Written Exams





Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
	combination with conventional drugs for curing human health problems.			
3.0	Values, autonomy, and responsibility			
3.1	- Work independently and use properly and confidently the tools and equipments in the pharmacognosy lab. to recognize genuine medicinal plants and detect admixture or adulteration.	V1	Practice sessions	Practical exam Observation card

C. Course Content

No	List of Topics (theoretical)	Contact Hours
1.	I. Seeds - Introduction: Scientific definitions and general morphological and histological features of the seeds - Study of macroscopic and microscopic characters, active constituents, uses and chemical tests of the following seeds: Foenugreek, Nux-vomica and Linseed, black mustard, White mustard, Cardamom and Strophanthus.	8
2.	II-Fruits: - Introduction: Scientific definitions and general morphological and histological features of the fruits. - Study of macroscopic and microscopic characters, active constituents, uses and chemical tests of the following umbelliferous fruits: Fennel – Anise – Ammi visanga and Coriander, Ammi-majus, Caraway, Dill, Cumin and Conium. - Study of macroscopic characters, active constituents, uses and chemical tests of non-umbelliferous fruits capsicum and vanilla.	8
3.	III-Roots and Rhizomes: - Introduction: Scientific definitions and general morphological and histological features of the roots and rhizomes. - Study of macroscopic and microscopic characters, active constituents, chemical tests and uses of ginger, Liquirice, rhubarb and Ipecacuanha. - Studying of macroscopic characters, active constituents, chemical tests and uses of colchicum, male fern Rauwolfia, ginseng and garlic.	8
4.	IV- Herbs: - Introduction. - Studying of macroscopic characters, active constituents chemical tests and uses of peppermint, thyme-basil, lobelia, cannabis, and solanaceous drug	5





5.	- Revision	1
Total		30
No	List of Topics (Practical)	Contact Hours
1.	Introduction of lab safety, handling of chemicals and reagents and drugs of natural origin.	2
2.	Introduction to seeds, macroscopic, microscopic studies of Nux vomica.	2
3.	Macroscopic and microscopic studies of Foenugreek and Linseed.	2
4.	Macroscopic study, active constituents and uses of Cardamom, Castor seed, black mustard, and white mustard.	2
5.	Introduction to fruits, umbelliferous fruits, Macroscopic and microscopic studies of fennel	2
6.	Macroscopic and microscopic studies of Ammi visnaga and Anise	2
7.	Macroscopic and microscopic studies of coriander.	2
8.	Macroscopic studies of Capsicum, Cumin, Conium, Caraway, dill, and star anise.	2
9.	Introduction of herbs, Macroscopic and microscopic studies of Thyme, and Mentha.	2
10.	Macroscopic studies of Basil, Hyoscyamus, Datura stramonium, Belladonna, Lobelia, and Cannabis.	2
11.	Introduction to rhizomes. Macroscopic and microscopic studies of ginger.	2
12.	Macroscopic and microscopic studies of Curcuma and rhubarb.	2
13.	Macroscopic study of Colchicum, Male fern and garlic bulb.	2
14.	Introduction to roots. Macroscopic and microscopic studies of Liquorice.	2
15.	Macroscopic study of Rauwolfia, Ginseng, Ipecacuanha and jalap.	2
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Mid-Term	7-9	20
2.	Assignments	15	5
3.	Observation card	1-15	5
4.	Practical quiz	16	5
5.	Practical Handbook (report)	1-15	5
6.	Quizzes	3-14	10
7.	Final practical exam	16	10
8.	Final theoretical exam	17-19	40
Total			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	Trease and Evans Pharmacognosy, International Edition E-Book
Supportive References	Textbook of pharmacognosy, by T. E. Wallis. J. and A. Churchill
Electronic Materials	www.dlaf.nu.edu.sa
Other Learning Materials	https://www.slideshare.net/jelalalaban5/group-4-ppt-44950682

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. A Suitable lecture room equipped with data show, internet, and sufficient number of seats. Suitable laboratories equipped with health and safety tools, internet, and sufficient number of seats.
Technology equipment (projector, smart board, software)	1. Computer 2. Internet access Data show
Other equipment (depending on the nature of the specialty)	1. Samples of different organs of medicinal plants 2. Optical microscope, glass slides and glass covers. 3. Test tubes

F. Assessment of Course Quality

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

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Pharmacognosy Department Council
REFERENCE NO.	14460213-1061-00001
DATE	20-08-2024