



# Course Specification

(Bachelor)

Course Title: **Pharmacognosy-I** *Enter Course Title.*

Course Code: **221 PHG-3**

Program: **Pharmaceutical sciences**

Department: **Pharmacognosy**

College: **Pharmacy**

Institution: **Najran University**

Version: **1**

Last Revision Date: **24-12-2023**

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## 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: ( 4<sup>th</sup> level / 2<sup>nd</sup> year)

#### 4. Course general Description:

Pharmacognosy-1 (221 PHG-3) course provide the students a general Knowledge about plant nature, cultivation, drying, package, storage and adulteration of natural drugs, in addition, studying of macroscopical and microscopical characters of leaves, bark and flowers. Also, differentiation between the classes of 2ry metabolites and their evidence based medicinal uses and application.

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

None

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

None

#### 7. Course Main Objective(s):

- Acquire the knowledge about the Macroscopical and microscopical Characters of different plant organs.
- Understand the different classes of plant constituents, their identification and uses

### 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"> <li>Traditional classroom</li> <li>E-learning</li> </ul>		
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.	<b>Tutorial</b>	0
5.	<b>Others (specify)</b>	0
<b>Total</b>		<b>60</b>

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

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and understanding</b>			
1.1	Demonstrate specialized knowledge of macroscopical and microscopical characters of leaves, barks and flowers of the medicinal plants under study.	<b>K1</b>	Lectures	Written Exams and assignments
1.2	Understanding the classes of plant constituents and uses.	<b>K1</b>	Lectures	Written Exams and assignments
<b>2.0</b>	<b>Skills</b>			
2.1	Integrate between different plant organs and constituents.	<b>S2</b>	Lectures	Written Exams
2.2	- Determine the characteristic elements of different plant organs	<b>S2</b>	Lab. work	Practical exam
<b>3.0</b>	<b>Values, autonomy, and responsibility</b>			
3.1	Demonstrate professional use of the tools pharmacognosy lab. to recognize genuine medicinal plant and detect admixture or adulteration.	<b>V1</b>	Practice session	Practical exam Observation card

## C. Course Content

No	List of Topics (theoretical)	Contact Hours
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1.	<p>I- General introduction :</p> <ol style="list-style-type: none"> <li>1- Origin of crude drug.</li> <li>2- Reserved food material.</li> <li>3- By-product.</li> </ol> <p>Active constituents (V.O, alkaloids, phenolic glycosides, tannins, bitter principles, saponins,....etc.)</p>	8
2.	<p>II- Preparation of crude drugs:</p> <ol style="list-style-type: none"> <li>1- Cultivation of medicinal plants.</li> <li>2- Collection of medicinal plants.</li> <li>3- Drying of crude vegetable drugs.</li> </ol> <p>Storage of crude drugs.</p>	2
3.	<p>III-Leaves:</p> <ol style="list-style-type: none"> <li>1- Introduction</li> <li>2- Studying of macroscopical and microscopical characters, active constituents and uses of (Datura stramonium, Atropa belladonna, Hyoscyamus, Digitalis, Senna and Buchu).</li> </ol> <p>Studying of macroscopical and microscopical characters, active constituents and uses of (Boldo, Squill, tea, Coca, Hamamelis, Jaborandi, and peppermint leaves).</p>	8
4.	<p>IV- Flowers:</p> <ol style="list-style-type: none"> <li>1- Introduction.</li> <li>2- Studying of macroscopical and microscopical characters, active constituents and uses of ( pyretherum, Clove, German Chamomile, Roman Chamomile and Hibiscus.</li> </ol> <p>Studying of macroscopical and microscopical characters, active constituents and uses of (Santonica, Saffron, Safflower, Calendula, Arnica and Lavander).</p>	6
5.	<p>V- Bark:</p> <ol style="list-style-type: none"> <li>1- Introduction.</li> <li>2- Studying of macroscopical and microscopical characters, active constituents and uses of (Cascara, Cinnamon and Cinchona barks)</li> </ol> <p>Studying of macroscopical and microscopical characters, active constituents and uses of (Frangula, Quillaia, Cascarilla and Pomegranata).</p>	6
Total		30





No	List of Topics (practical)	Contact Hours
1.	Lab safety measures and introduction of handling of the electronic microscope	2
2.	microscopical investigation of dusting powders e.g Starch (wheat, potato, maize and rice)	2
3.	microscopical investigation of Talc, Kaoline, sulphure and bentonite	2
4.	Introduction into leaves (macroscopical characters)	2
5.	Introduction into microscopical characters of leaves	2
6.	Macroscopical and microscopical characters of Senna leaf and mentha	2
7.	Macroscopical and microscopical characters Datura and hyoscyamus	2
8.	Revision	2
9.	Introduction to bark	2
10.	Macroscopical and microscopical characters Cinnamon and cassia	2
11.	Macroscopical and microscopical characters Cascara and quallaia	2
12.	Introduction to flowers	2
13.	Macroscopical and microscopical characters Chamomile and pyrethrum	2
14.	Macroscopical and microscopical characters Lavender, Karkadeh	2
15.	Revision	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	10	5
4.	quizzes	1-14	10
5.	Practical quiz	12	5
6.	Final practical exam	16	15
7.	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	<a href="http://www.dlaf.nu.edu.sa">www.dlaf.nu.edu.sa</a>
Other Learning Materials	<a href="https://www.slideshare.net/jelalalaban5/group-4-ppt-44950682">https://www.slideshare.net/jelalalaban5/group-4-ppt-44950682</a>

## 2. Required Facilities and equipment

Items	Resources
<b>facilities</b> (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.
<b>Technology equipment</b> (projector, smart board, software)	1. Computer 2. Internet access Data show
<b>Other equipment</b> (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 Questionnaires (indirect)
Effectiveness of Students assessment	Faculty members and students	Indirect Questionnaires (indirect)
Quality of learning resources	Faculty members and students	Indirect Questionnaires (indirect)
The extent to which CLOs have been achieved	Peer reviewer Student	Direct Questionnaires (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.	14450612-0511-00010
DATE	25-12-2023

