



Quality Assurance Unit  
Department of Pharmacognosy



Assiut University  
Faculty of Pharmacy

## Program Specification

### 1-Basic Information

1. Program Title: Ph. D. of pharmaceutical science (Pharmacognosy)
2. Program type: Single  Double  Multiple
3. Department: Pharmacognosy
- 4- Coordinator:
- 5- External evaluator:
- 6- Last date of program specification approval: 2010

### 2-Professional Information

#### 1a. Program Aims

Ph. D. program in Pharmacognosy depends on study of positive impact on the scientific field which is presented as dissertation judged by external evaluator and discussed publicly. The program guarantees studying and passing of specific courses that evaluated by final exams, the program also allow completing parts of the research project abroad in well equipped, respectable laboratories and under collaborative supervision between local and foreign supervisors. In other cases the Ph. D. students can take the degree from foreign country according to personal or governmental funded scholarship regulated by the ministry of higher education and students must follow the rules of the university offering the scholarship. The Ph. D. student learns the updates in the scientific field of Pharmacognosy.

#### 1b. Graduates attributes:

By the end of the Ph. D. program, the graduate should be able to:

- a- Perfect use of the basic concepts of the scientific research in the field of separation of active principle from medicinal plants.
- b- Keep up to date in the field of spectral analysis for identification of active principles isolated from medicinal plants including the new theories in the field of specialty.
- c- Improve the gained knowledge continuously concerning the chemistry of natural products.
- d- Think in creative and innovative manner and take decisions according to the available data.
- e- Prepare and publish scientific paper in specific journals.
- f- Accept scientific criticism, and effectively communicate with scientific community.
- g- Innovate solutions for scientific problems concerning marine, wild plants and tissue culture.
- h- Work effectively in different conditions and perseverance and able to use suitable technologies for his professional practices.
- i- Make suggestions to achieve the research hypothesis concerning medicinal plants problems and improve methods and tools and new trends in his professional practices.
- j- Collaborate with other scientific research fields as pharmacology and microbiology for valuable research work.
- k- Design and leadership project team, share others with advices.
- l- Justify conclusions of medicinal plant taxonomy with scientific evidence.
- m- Commit to scientific honesty.
- n- Apply the scientific methods in the evaluation of the results obtained from the scientific experiment.
- o- Richness the scientific heritage in the field of isolation and biology of active principles isolated from the medicinal plants.
- p- Self continuous improvement and learn his experiences to others.
- q- Analyze and evaluate the information in the field of specialty then integrate and apply them.
- r- Mastering wide range of professional and practical skills in the field of specialty.
- s- Contribute in community development and preservation of the environment.
- t- Effectively use and develop the available resources and finding new resources.

NARS Graduates attributes	Ph.D. Pharmacognosy Graduates attributes
1	a
5	b
-	c
11	d
-	e
10	f
6	g
9	h
8	i
4	j
10	k
-	l
14	m
-	n
2	o
15	p
3	q
7	r
13	s
12	t

### **3- Intended Learning Outcomes of Course(ILOs)**

#### **a- Knowledge and Understanding:**

Having successfully completed the Ph.D. program of pharmaceutical science (pharmacognosy), the graduate should have the following:

- a1- Fundamentals of theories, basics and the new trends in the chemistry of natural products field and the anatomy of medicinal plants.
- a2- Ethics and relevant law of scientific research and professional work.
- a3- knowledge in separation and identification of active principles from medicinal plants.
- a4- Knowledge related to laboratory safety and safe waste disposal.
- a5- Basics and principles of quality in scientific research and professional work.

#### **b- Intellectual Skills:**

Upon completion the Ph.D. program of pharmaceutical science (pharmacognosy), the graduate should be able to:

- b1- Analyze and evaluate the information gained in the isolation and identification of active principles, then integrate and apply them.

- b2- Deduce logic assignments from tissue culture experiments.
- b3- Innovate and deals effectively with research problems using the available information.
- b4- Planning to improve performance and take correct decisions concerning the field of specialty.
- b5- Evaluate the strength, weakness, opportunities and threatens in the suggested projects.
- b6- Write and publish scientific research papers in local and international journals and conferences.
- b7- Richness the scientific heritage by adding the new active principles isolated from the medicinal plants.
- b8- Do interactive discussion using the available information.

**c- Professional and practical Skills:**

At the end of the Ph.D. program of pharmaceutical science (pharmacognosy), the graduate should be able to:

- c1- Design, write and evaluate research projects and reports in the filed of pharmacognosy.
- c2- Acquire and apply different basic and modern skills in isolation, identification and biological activities of active principles from medicinal plants.
- c3- Do laboratory experiments in a safe manner.
- c4- Analyze the gained data and the available information effectively (digitally, statistically...etc).
- c5- Arrange, catalogue and save the result of the experiments.
- c6- Use advanced technology tool in chromatography and spectral analysis.
- c7- Evaluate and improve methods and tools used for isolation, identification and biological studies of active principles from medicinal plants.
- c8- Planning for improvement of scientific research, professional practice and development of colleagues performance.

**d- General and Transferable Skills:**

At the end of the Ph.D. program of pharmaceutical science (pharmacognosy), the graduate should be able to:

- d1- Contribute in workshops, congresses and scientific conferences with the ability to mange them.
- d2- Communicate interactively with colleagues, bosses and coworkers.
- d3- Use information technology to improve the scientific research and professional practice.

d4- Lead and work in team; educate and assess others; self assessment and continuous learning.

d5- Manage her/his time.

d6- Use different sources to get information and knowledge.

#### **4- Academic standards**

- External References of Standards (Benchmarks). The National Academic References Standards 2009 (NARS) were adopted.
- Comparison of Provision to External References.

<b>NARS</b>	<b>Ph. D. Pharmacognosy</b>
<b>2.1. Knowledge &amp; Understanding</b>	<b>Knowledge &amp; Understanding</b>
2.1. a	a1
2.1.b and c	a2
-	a3
2.1. e	a4
2.1.d	a5
<b>2.2. Intellectual Skills</b>	<b>2.2. Intellectual Skills</b>
2.2.a	b1
-	b2
2.2.b and h	b3
2.2.f and g	b4
2.2.e	b5
2.2.d	b6
2.2.c	b7
2.2.i	b8
<b>2.3. Professional &amp; practical skills</b>	<b>2.3. Professional &amp; practical skills</b>
2.3.b	c1
2.3.a	c2
-	c3
-	c4
-	c5
2.3.d	c6
2.3.c	c7
2.3.e	c8
<b>2.4. general and transferable skills</b>	<b>2.4. general and transferable skills</b>
2.4.g	d1 and d5
2.4.a	d2
2.4.b	d3
2.4.c, d and f	d4
2.4.e	d6

#### **5- Curriculum structure and contents**

5.a- Program duration five years.

### 5.b- Program structure:

- Obligatory courses in theoretical and practical knowledge in
  - New trends in natural products identification.
  - Composition, analysis and uses of drugs and foods (including quality assurance).
  - Laboratory works and publication.
  - Written dissertation
  - Dissertation submission

5.b.i- No. of hours/week : Lectures  Lab/Exercise  Total

5.b.ii- No. of hours: Compulsory  Elective ---- Optional ---

5.b.iii- No. of hours of basic sciences: No. .... %

5.b.iv- No. of hours of social sciences and humanities: No. ... % .....

5.b.v- No. of hours of specialized courses: No.  %

5.b.vi- No. of hours of other courses No. --- % ---

5.b.vii- Practical/Field training : .....

5.b.viii- Program levels (in credit hour system): .....

## 6- Program Courses

### a- Compulsory

Code No.	Course title	No. of hrs	No. of hours			Program ILOs covered (by No.)
			Lec.	Lab.	Tut	
1	New trends in natural products identification	47	13	-	34	a1, b1, b3, b4, b8, c4, c6, d2, d3, d4, d5, d6
2	Composition, analysis and uses of drugs and foods (including quality assurance)	30	30	-	-	a1, b1, b3, b4, b5, b6, b8, c1, c2, d1, d2, d3, d4, d6

### b- Elective

### c- Optional

## 7- Program Admission Requirements

Applicants for the degree of Doctor of Philosophy in Pharmaceutical Sciences:

- 1 - To pursue study for a semester in special courses (maximum of four) determine the denomination by the department after taking the opinion of the Supervisory Committee to the letter. The total number of hours of these courses is 60 hours of not more than 80 hours and lead the student through the exam before discussing the letter and should receive not less than 60% of the whole material to succeed in it and gives students just one chance to re-exam with flunked it.
- 2 - The innovative research in the subject by the college board on the proposal by the department and in accordance with the academic plan for the division for at least two years from the date of approval of the college board to register the subject.
- 3 - Requires the subject to be relevant to the specialization of the student in a master's degree and the college board on the recommendation of the supervisory committee to the letter and after consulting the concerned department to instruct the student

to do some research at the Institute for scientific or technical division recognized by the university.

- 4 - The student scientific work of the three workshops at least on the subject of research and study one of them during the pre-registration and at the recent presentation of the message in its final form and before the formation of the judging panel and discussion.
- 5 - To publish research and at least one or acceptance for publication of the results covered by the communication in a scientific journal specialized or scientific conference specialist.
- 6 - To pass the student successfully the English language course or get a certificate of passing from one foreign language institutes, foreign language adopted in accordance with rules established by the university council in this regard.

#### **Article(26):**

Canceling of the Ph.D. registration of the student in the following cases:

- 1 - If you do not get a degree within five years from the date of registration, except where the college board to maintain the registry established by a further period on the proposal of the supervisory committee to the letter and the council of the section.
- 2 - If you have made to the oversight committee reasoned request to the letter accepted by the department concerned and the college board.
- 3- If the jury rejected the message is categorically denied.
- 4 - If the student has exhausted the number of times of failure in examinations and special courses in accordance with the provisions of paragraph e of Article (17) of these Regulations.
- 5 - If the student was lost on follow-up study and research in the university for two years without an excuse acceptable after a proposal by the department concerned and the commission on graduates and research and the approval of the faculty and the student will be notified formally to do so.
- 6 - If the supervisor or supervisors for two consecutive non-serious student in search, and after the proposal of the board and the relevant section of the graduate studies committee and faculty research and the approval of the college student to be notified formally to do so.

Given of getting a Ph.D. in pharmaceutical sciences certificate indicating the specialization rule and the title of the message.

### **8- Regulation for progression and Program Completion**

- 7.1. Minimum 60 % of the maximum grade is the passing grade for any course
  - 7.2. A student fails in any course if attended less than 75% of the hours of the course Second Year/Level/Semester
1. A student must perform a research project approved by the department board
  2. A student must present at least three seminars during his study including the one for thesis defense
  3. A student must prepare and submit a research paper for a journal or a scientific conference.
  4. After passing all courses, a student can submit a thesis to a discussion committee and discussed in public.

### **9- Methods for evaluation of the program students**

<b>Method</b>	<b>ILOs</b>
Written exams.	Knowledge and understanding and intellectual skills
Seminars	Intellectual, general and transferable skills
Published scientific research papers	Intellectual, professional and practical skills
Public discussion of the thesis	Intellectual, professional, practical, general and transferable skills

**Head of the Department:** Prof. Dr.

**Program coordinator:**

**Date:** /2010.



## Intended Learning Outcomes (ILOs) Matrix

### Ph. D. of pharmaceutical science (Pharmacognosy)

Skills	a					b								c								d					
Course	1	2	3	4	5	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6
New trends in natural products identification	X					X		X	X				X				X		X				X	X	X	X	X
Composition, analysis and uses of drugs and foods (including quality assurance).	X					X		X	X	X	X		X	X	X							X	X	X	X		X