

In the Name of God

Islamic Republic of Iran Ministry of Health and Medical Education Deputy for Education

Pharmacognosy **Degree: Doctorate of Philosophy (PhD)**

Total Course Credits:

Core: 18

Non-core: 2 out of 6

Thesis: 22

Program Description:

The field of pharmacognosy (PhD) is a branch of pharmaceutical sciences which incorporates investigating and studying herbal medicine as well as drugs and components with natural origin. The areas of research in this field include: phytochemical investigations (extraction, separation, and identification of natural compounds, plant cell culture, biochemical transformations, and biosynthetic pathways), phytopharmaceuticals (**producing natural** medicine from crude materials), and phytotherapy (therapeutic indication of natural remedies and medications).

Aim

The main mission of the course is training committed, knowledgeable, and competent experts in pharmacognosy.

Admission Requirements

- Pharmacy Doctorate (Pharm. D.) or Master's degree (MSc) in pharmacy.
- Eligibility for entering to the course according to the PhD educational rules and regulations.

Important note: These general conditions do not exclude specific conditions of each institute or university.

Expected Competencies at the End of the Program

General Competencies*

Specific Competencies and Skills

At the end of the program learners will be competent in the following skills:

In **education**, it incorporates contribution to teaching pharmacognosy to students according to the university's needs.

In **research** designing, it includes implementing and evaluating basic and applied researches in various contexts of related field.

In **providing consulting services**, it contributes to cooperation and consultation on production of phytopharmaceuticals.

Educational Strategies, Methods and Techniques*

Student Assessment

a) Methods of the assessment

Residents will be evaluated by the following methods: Written and verbal assessment

b) Types of the assessment

Periodic, comprehensive (final); monitoring the progress and completion of the thesis

Ethical Considerations *

*Note: The related document(s) can be found at <http://hcmep.behdasht.gov.ir/>.

Tables of the Courses

Table A. Compensatory courses

Code of the course	Title of the course	Number of Credits	Total hours of the course			Prerequisite or concurrent courses
			Theoretical	Practical	Total	
01	plant biochemistry	1	17	-	17	-
02	Plant ecology	1	17	-	17	-
03	Economics and marketing of raw natural Materials and medications	1	17	-	17	-
04	*Pharmaceutical information systems	1	9	17	26	-
Total		4				

Students should earn all or some of credits (Table A) as specified by the corresponding department.

* Passing this course is obligatory for those who have not completed it before.

Table B. Core courses

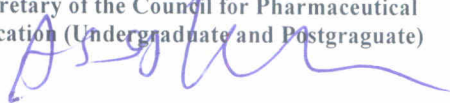
Code of the course	Title of the course	Number of Credits	Total hours of the course			Prerequisite or concurrent courses
			Theoretical	Practical	Total	
05	Advanced analytical	3	34	34	68	
06	Extraction, isolation and identification of natural compounds	6	68	68	136	05
07	Industrial processing of herbal medicines	1	17	-	17	-
08	Quality Control of natural	2	17	34	51	06
09	Advanced pharmacognosy	2	34		34	
10	Phytotherapy and natural medicine information	3	51	-	51	
11	Research methods in pharmacognosy	1	9	17	26	-
Total		18				

Table C. Non-core courses

Code of the course	Title of the course	Number of Credits	Total hours of the course			Prerequisite or concurrent courses
			Theoretical	Practical	Total	
12	Special topics in pharmacognosy	2	34	-	34	-
13	Plant cell and tissue culture	2	34	-	34	-
14	Medicinal plants systematic	2	34	-	34	-
Total		6				

* Students should choose 2 out of 6 non-core courses specified by the corresponding department.

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