In the Name of God

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

Pharmaceutics
Degree: Doctorate of Philosophy (PhD)

Total Course Credits
Core: 24
Non-core: 4 out of 8
Thesis: 22

Program Description
The PhD degree in Pharmaceutics is a specialized discipline in Pharmacy and the highest academic degree awarded in this field of study. Pharmaceutics includes different educational and research courses related to formulation, physicochemical and microbial control, and pharmacokinetic study of drugs.

The general aims of the Pharmaceutics PhD Program are:

- Training specialized forces in the field of Pharmaceutics for supplying the human resources required for Iranian academic and research centers.
- Training the required specialized human resources for Iran's pharmaceutical industries.

Admission Requirements
Student admission is conducted through holding a centralized exam by the Secretariat of the Pharmacy Specialized Training Council.
Holders of PharmD or MSc degree in Pharmacy (must also possess a BSc degree in Pharmacy) can take part in the PhD entrance exam of Pharmaceutics. Those passing the written exam and the oral exam (interview) can subsequently take part in the PhD program upon registration.
Other regulations regarding participation in the Pharmaceutics PhD exam shall be in compliance with the relevant educational code for PhD programs, approved by Iran High Council of Educational Planning in Medical Sciences.

Expected Competencies at the End of the Program

General Competencies* 

Specific Competencies and Skills
Graduates of pharmaceutics will be able:

- To become a lecturer at universities
- To perform research in various research centers
- To work in an industry
- To be a researcher in research centers
- To establish a company
- To act as a manager in various pharmaceutical sectors

Educational Strategies, Methods and Techniques* 

Student Assessment

Methods of the assessment

Residents will be evaluated by the following methods:
Written; Verbal; Logbook-based assessment of their courses

Board exam

Residents will take part in a comprehensive exam after passing their theoretical courses. The comprehensive exam consists of both written and oral evaluation. The written exam may be multiple choice or written exam.

Thesis

Monitoring the progress of PhD reports (residents will give three progress reports) and completion of the thesis. Residents will give three progress report and one (final defense of their thesis by and publishing at least 2 articles in ISI journals).

Ethical Considerations* 

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

Tables of the Courses

Table 1. 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	Medical Informatics Systems	1	9	17	26	-

* In case the Medical Informatics Systems course has not been passed by the student during the PharmD or MSc program, it must be considered as a compensatory course.

Table 2. 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	
02	Biopharmaceutics and Pharmacokinetics, Theoretical	3	51	-	51	-
03	Biopharmaceutics and Pharmacokinetics, Practical	1	-	34	34	-
04	Physical Pharmacy, Theoretical	2	34	-	34	-
05	Physical Pharmacy, Practical	1	-	34	34	-
06	Industrial Pharmacy, Theoretical	3	51	-	51	-
07	Industrial Pharmacy, Practical Project	1	-	34	34	-
08	Drug Delivery Systems (1)	2	34	-	34	-
09	Drug Delivery Systems (2)	2	34	-	34	-
10	Advanced Pharmaceutical Microbiology	2	34	-	34	-
11	Quality Control of Medicines, Theoretical	2	34	-	34	-
12	Quality Control of Medicines, Practical Project	1	-	34	34	-
13	Fundamentals and Application of Polymers in Pharmacy	1	17	-	17	-
14	Seminar 1	1			1	-
15	Seminar 2	1			1	-
16	Seminar 3	1			1	-
Total		24				

Table 3. 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	
14	**Advanced Pharmaceutical Statistics**	2	34	-	34	-
15	**Introduction to Computer Softwares**	2	17	34	51	-
16	**Radiopharmaceutics**	2	34	-	34	-
17	**Pharmaceutical Biotechnology**	2	34	-	34	-
Total		**8**				

Students should choose 4 credits as specified by the corresponding department.