

## In the Name of God

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

## Pharmacoeconomics and Pharmaceutical Administration

### Degree: Doctorate of Philosophy (PhD)

#### Total Course Credits

Core: 27

Non-core: 2 out of 13

Thesis: 20

Total: 49

#### Program Description

"Healthy human" is the most precious asset of societies and therefore has been the focus of most national and international development strategies. However, most of the time decision makers are faced with the fixed budget problem, where they have to decide how to allocate or ration resources between patient groups. Managing health sector is one of the major challenges of the today's most governments around the globe. Faced with increasing healthcare costs, many countries are now requiring evidence of cost effectiveness to convince decision makers to include the proposed medicine to their national medicine list. This may cause more efficient pricing of the medicines. In recent decades decision makers in healthcare system have realized the importance of prioritization in the health sector and health technology assessment (HTA) has been extensively used by policy makers in developed countries. HTA is a multidisciplinary activity which systemically evaluates the effect of a technology on health, on the availability and distribution of resources and on other aspects of health system performance such as equity and responsiveness.

Today Pharmacoeconomics can be used as a tool of management, which could be applied to strategic and operational decisions about pharmaceutical development, production and consumption of medicines. Pharmacoeconomics could provide direction for allocation of limited resources in healthcare system. Pharmacoeconomics use economic approaches are applied to pharmaceuticals to guide the use of limited resources to yield maximum value to patients, health care payers and society in general. Pharmacoeconomics & Pharmaceutical Administration, as an post graduate discipline in Iran pharmacy education system started since 2005.

#### Definition

The graduates will be expert in using economics and policy principles in appropriate allocation of resources available in healthcare system in order to prove equitable access to the most cost-effective clinical interventions. In addition, they learn how to efficiently allocate resources in research and development activities in pharmaceutical industry.

#### Aims

- Application of the economic & management sciences in the pharmacy education, research, training and policy making.
- Enhancing knowledge of pharmacists in the fields of economic & policy sciences.
- Leading & supervising research in the fields of Pharmacoeconomics and pharmaceutical administration & policy.

#### Admission Requirements

- A master degree (MSc) in one of the fields of Economics, Health economics, Health technology assessment, Healthcare management, Regulatory affairs, Pharmacy or a general doctorate degree on one of the fields of Medicine, Pharmacy and veterinary is required for entering the discipline.
- Being eligible for entering to the course according to the PhD educational rules and regulations.

## **Expected Competencies at the End of the Program**

### **General Competencies\***

#### **Specific Competencies and Skills**

Graduates of pharmaceuticals will be able:

- Healthcare law, policies, plans and processes critique,
- Pharmaceutical need assessment in health care system,
- Insurance policies and processes critique,
- Life expenses evaluation,
- Total revenue evaluation of a putative society,
- Financial and accounting indexes and bills interpretation,
- Efficiency evaluation in a putative situation,
- Pharmaceutical and health care services pricing,
- Advanced electronic research,
- Dealing with professional software,
- Working in professional environment such as pharmaceutical industry, insurance system,
- Healthcare resources identification,
- Healthcare resources prioritization,
- Medication categorization according to cost-effectiveness,
- Codify reimbursed medications index,
- Providing decision makers with useful information,
- Pharmaceutical industry research and development subjects` prioritization,
- Micro and macro management in pharmaceutical industry,
- Working in pharmaceutical commercialization and marketing,
- Drug policy making.

### **Educational Strategies, Methods and Techniques\***

#### **Student Assessment (Methods and Types)**

A) Methods of assessment: residents will be evaluated by the following methods: Written, Verbal, OSFE (portfolio including: educational activities` results, exam results, articles, awards, progress certificate and etc.)

B) Types of the assessment: periodic (each semester), comprehensive (final exam); monitoring the progress and completion of the thesis.

### **Ethical Considerations\***

\*Note: The related document(s) can be found at <http://hcmeq.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	Theoretical	Practical	Total	
01	Medical information system*	0.5	0.5	1	9	17	26	--
02	Micro- and Macroeconomics	2	--	2	34	--	34	--
03	Management principles	2	--	2	34	--	34	--
04	Pharmacology	3	--	3	51	--	51	--
05	Professional English language skills	2	--	2	34	--	34	--
<b>Total</b>		<b>9.5</b>	<b>0.5</b>	<b>10</b>	<b>162</b>	<b>17</b>	<b>179</b>	<b>--</b>

\* Completing this course is obligatory for those who have not passed it before.

**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	Theoretical	Practical	Total	
06	The economics of health care	2	--	2	34	--	34	Micro- and Macroeconomics (02)
07	Pharmaceutical management in healthcare organization	3	--	3	51	--	51	Management principles (03)
08	Accounting and financial management	2	--	2	34	--	34	--
09	Pharmacoepidemiology	2	--	2	34	--	34	Pharmacology (04)
10	Health policy making	2	--	2	34	--	34	Pharmacology (04)
11	Pharmaceutical law and ethics	3	--	3	51	--	51	--
12	Pharmacoeconomics	3	--	3	51	--	51	Micro- and Macroeconomics (02), The economics of health care(06), Pharmacology (04)
13	Research methodology in Health databases	1	1	2	34	17	51	Medical information system(01)
14	Advanced health statistics	1	1	2	34	17	51	--
15	Seminar and workshop	1	1	2	34	17	51	Medical information system(01)
16	Pharmaceutical Supply chain management	2	--	2	34	--	34	Pharmaceutical management in healthcare (07), Accounting and financial management(08)
17	Public health economic issues	2	--	2	34	--	34	The economics of health and health care (06), Pharmacoeconomics(12)
18	Thesis	20	--	20	340	--	340	--
<b>Total</b>	<b>47</b>	<b>44</b>	<b>3</b>	<b>47</b>	<b>748</b>	<b>51</b>	<b>799</b>	<b>--</b>

**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	Theoretical	Practical	Total	
19	Management information systems	1	1	2	34	17	51	Medical information system(01), Pharmaceutical management in healthcare (07)
20	Management control systems	2	--	2	34	--	34	Medical information system(01), Pharmaceutical management in healthcare (07)
21	World health policy issues	2	--	2	34	--	34	Health policy making (10), Public health economic issues(17)
22	Econometrics	2	--	2	34	--	34	Advanced health statistics(14)
23	Research and development and marketing management	2	--	2	34	--	34	The economics of health care(06), Pharmacoeconomics(12), Pharmaceutical management in healthcare organization(07)
24	Strategic management	2	--	2	34	--	34	Pharmaceutical management in healthcare (07), Health policy making (10)
<b>Total</b>	<b>13</b>	<b>12</b>	<b>1</b>	<b>13</b>	<b>204</b>	<b>17</b>	<b>221</b>	--

Students should choose 2 out of 13 credits specified by the corresponding department.

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