

In the Name of God

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

Neuroscience Doctor of Philosophy (PhD)

Total Course Credits

- Core: 21
- Noncore: 6
- Dissertation: 20

Program Description

The field of neuroscience has research strengths in neural function and dysfunction. It covers basic and clinical research, ranging from the analysis of molecules to the whole organism. PhD students learn the instruction, research and teaching methodology they need to become competent in neuroscience research and education.

The students study the structural, developmental, biochemical, physiological, pharmacological and genetic aspects of the nervous system. The graduates help in programming theoretical and practical aspects of the field, and advancing the frontiers of knowledge through doing research and looking for the new mechanisms and relationships between the brain and behavior.

We have an inter-disciplinary PhD program in neuroscience. An essential feature of our training mission is to train committed, knowledgeable and competent individuals with the required education and research experience in neuroscience.

Admission Requirements

- Passing an exam on the following topics:
Neuroanatomy, Neurobiology, Neurophysiology, and Neuropharmacology
- Taking part in an interview after achieving the pass mark
- Having the admission criteria based on the regulations of universities
- Being eligible for entering the program

*Important note: These general conditions do not necessarily 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:

- Teaching neuroscience subjects
- Managing experimental projects
- Using specialized experimental equipment
- Handling the animals
- Performing stereotaxic surgery on animals
- Performing immunohistochemical analysis
- Administering and interpreting behavioral tests

- Interpreting the results of statistical analysis
- Launching a laboratory of neuroscience
- Setting up a translational research program

Educational Strategies, Methods and Techniques*

Student Assessment (Methods and Types)

- Formative (Quizzes and Midterm Exam)
- Summative (Final Exam)
- Comprehensive exam
- Methods of assessment: verbal, written, observation, clinical competence assessments(OSCE, OSLE, OSFE, DOPS, 360 degree evaluation competency)
- Portfolio assessment: Log book, test results, reports, articles, certificates, promotions...

Ethical Issues*

*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	Credits			Teaching Hours		
		Theoretical	Practical	Total	Theoretical	Practical	Total
01	Medical Information Systems	0.5	0.5	1	9	17	26
02	Advanced Statistics and Research Methods	2.5	0.5	3	43	17	60
Total		3	1	4	52	34	86

These courses are basic for PhD program, but have not been completed previously.

*Completing these courses is obligatory for those who have not completed them before.



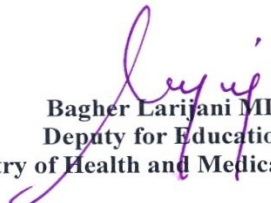
Table 2. Core Courses

Code of the Course	Title of the Course	credits			Teaching Hours			Prerequisite or Concurrent Courses
		Theoretical	Practical	Total	Theoretical	Practical	Total	
03	Cellular and Molecular Neurobiology	2	-	2	34	-	34	-
04	Neurophysiology	2	-	2	34	-	34	-
05	Neuroanatomy	1	1	2	17	34	51	-
06	Neuropharmacology	2	-	2	34	-	34	-
07	Research Methods in Basic and Clinical Neuroscience	2	2	4	34	68	102	-
08	Pathophysiology of the Nervous System	2	-	2	34	-	34	-
09	Regeneration of Central Nervous System	2	-	2	34	-	34	-
10	Neurohistology and Neuroembryology	1	1	2	17	34	51	-
11	Neurohistochemistry	0.5	0.5	1	9	17	26	-
12	Neurogenetics	2	-	2	34	-	34	03
13	Dissertation	-	-	20	-	-	-	-
Total		16.5	4.5	41	281	153	434	

Table 3. Non-core Courses

Code of the Course	Title of the Course	Credits			Teaching Hours			Prerequisite or Concurrent Courses
		Theoretical	Practical	Total	Theoretical	Practical	Total	
14	Neuroendocrinology	2	-	2	34	-	34	
15	Paraclinical studies of Nervous System	1	1	2	17	34	51	
16	Mind and Consciousness	2	-	2	34	-	34	
17	Cognitive Neuroscience	2	-	2	34	-	34	
18	Cognitive Psychology	2	-	2	34	-	34	
19	Cognitive Neuropsychology	1	1	2	17	34	51	
Total		10	2	12	170	68	238	

After the dissertation supervisor's consent and approval of the postgraduate education council, students must take 6 credits of the courses in Table 3 that are relevant to the subject of their dissertation project.

<p>Jamshid Hajati PhD Secretariat of the Council for Education of Health and Basic Medical Sciences (Undergraduate and Postgraduate)</p> 	<p>Seyed Mansour Razavi MD Secretary of the Supreme Council for Medical Sciences Planning</p> 	<p>Bagher Larijani MD Deputy for Education Ministry of Health and Medical Education</p> 
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