

The Master's Program In Nuclear Physics

There are two tracks for the Master's degree offered at the department of physics; the first track is a non-thesis track, in which students must pass a comprehensive exam after successfully finishing the courses required by the program's Study Plan.

The other track is one that requires the student, in addition to successfully finishing the courses required by the Study Plan, to conduct research, and subsequently submit and defend a Master's thesis.

Non- Thesis Master's Degree Track

❖ Study Plan

I. GENERAL RULES AND CONDITIONS:

1. This plan conforms to the regulations of the general frame of the higher graduate studies programs.
2. Areas of specialty for admission in this program :
 - Bachelor degree in Physics
 - Bachelor degree in Applied Physics
 - Bachelor degree in Nuclear Physics
 - Bachelor degree in Radiation Physics

II. Special Conditions: None

III. THE PLAN: Studying (33) Credit Hours as follows:

1. Obligatory Courses (24 credit hours):

Course-Number	Course Title	Credit Hours			Pre-requisite
		Theoretical	Practical	Total	
0302713	Nuclear Physics Laboratory	-	5	3	-
0302754	Quantum Mechanics-1	3	-	3	-
0302755	Quantum Mechanics for Nuclear Physics Students	3	-	3	0302754
0302756	Statistical Mechanics - 1	3	-	3	-
0302758	Generation and Interactions of Electromagnetic Radiation	3	-	3	-
0302759	Radiation Detection and Measurements	3	-	3	-
0302763	Nuclear Physics-1	3	-	3	-
0302764	Nuclear physics for Nuclear Physics Students	3	-	3	0302763

2. Elective Courses: Studying (9 credit hours) from the following:

Course-Number	Course Title	Credit Hours			Pre-requisite
		Theoretical	Practical	Total	
0302793	Elementary Particles Theory	3	-	3	-
0302750	Nuclear Reactor Theory	3	-	3	-
0302712	Acceleration of Charged Particles	3	-	3	-
0302785	Applications of Nuclear Physics	3	-	3	-
0302797	Special Topics in Nuclear Physics	3	-	3	-

3. Pass the comprehensive Exam: (0302798) after successful completion of all courses.

Thesis Master's Degree Track

❖ Study Plan

I. GENERAL RULES AND CONDITIONS:

1. This plan conforms to the regulations of the general frame of the higher graduate studies programs.
2. Areas of specialty for admission in this program:
 - Bachelor degree in Physics
 - Bachelor degree in Applied Physics
 - Bachelor degree in Nuclear Physics
 - Bachelor degree in Radiation Physics

II. Special Conditions: None

III. THE PLAN: Studying (33) Credit Hours as follows:

1. Obligatory Courses (18 credit hours):

Course Number	Course Title	Credit Hours			Pre-requisite
		Theoretical	Practical	Total	
0302754	Quantum Mechanics-1	3		3	-
0302755	Quantum Mechanics for Nuclear Physics Students	3		3	0302754
0302756	Statistical Mechanics - 1	3		3	-
0302758	Generation and Interactions of Electromagnetic Radiation	3		3	-
0302763	Nuclear Physics-1	3		3	-
0302764	Nuclear physics for Nuclear Physics Students	3		3	0302763

2. Elective Courses: Studying (6 credit hours) from the following:

Course Number	Course Title	Credit Hours			Pre-Requisite
		Theoretical	Practical	Total	
0302712	Acceleration of charged Particles	3		3	-
0302713	Nuclear Physics Laboratory	-	5	3	-
0302750	Nuclear Reactor Theory	3		3	-
0302759	Radiation Detection and Measurements	3		3	-
0302785	Applications of Nuclear Physics	3		3	-
0302793	Elementary Particles Theory	3		3	-
0302797	Special Topics in Nuclear Physics	3		3	-

3. Dissertation: (9) Credit Hours (0302799)