Master of Science in Physics

College of Science

King Faisal University

Program Name	Master of Science in Physics

1. Introduction

The Master's Program in Physics was developed to provide students with the needs in the Eastern Region and to cover the labor market and attract foreign students to study these programs and to develop community partnership and international cooperation in this field.

There are two plans to get the master degree:

- Thesis plan (Courses and thesis plan)
- Non-Thesis plan (Courses-only Plan)

2. Program Information

Program Name	Master of Science in Physics
College	College of Science
Track	Physics
Level	Postgraduate
Degree	MSc
Years of Study	2 Years
Credit Hours	33 or 42
Language	English

3. Admission Requirements

- Higher education council regulated the program by the decision (# 3/6/1417-26/08/1417).
- Passing the written examination prepared by the department for this purpose.
- Study some complementary courses for students whose academic records do not include the basic courses in the department's plan (determined by the department).
- Obtaining the English language certificate in: (TOEFL-60) or (IELTS-5) or (STEP-83%).

4. Study Plan

First Track: Thesis plan (Courses and thesis plan)

Students should be study and approve 33 credits divides as:

- 9 credits compulsory courses
- 18 credits elective courses
- 6 credits Master Thesis (Phys 599)

Year 1

First Semester

Course Code	Course Title	Credit Hours
501	Mathematical Physics (1)	3
503	Classical Mechanics	3
504	Quantum Mechanics1	3

Second Semester

Course Code	Course Title	Credit Hours
506	Electrodynamics (1)	3
508	Statistical Physics	3
551	Design of Experiments	2
561	Physics self-study	1

Year 2

First Semester

Course Code	Course Title	Credit Hours
	Elective course	3
	Elective course	3
	Thesis	-

Second Semester

Course Code	Course Title	Credit Hours
	Elective course	3
	Thesis	6

Third (Thesis's track)

Course Code	Course Title	Credit Hours
08171700	Thesis	8

Second Track: Course Track

Students should be study and approve 42 credits divides as:

- 21 credits compulsory courses
- 21 credits elective courses
- General exam

Compulsory courses

Year 1

Second Semester

Course Code	Course Title	Credit Hours
506	Electrodynamics (1)	3
508	Statistical Physics	3
551	Design of Experiments	2
561	Physics self-study	1
501	Mathematical Physics (1)	3
503	Classical Mechanics	3
504	Quantum Mechanics1	3
598	Project	3

Elective Courses

Course Code	Course Title	Credit Hours
502	Mathematical Physics (2)	3
505	Quantum Mechanics (2)	3
507	Electrodynamics (2)	3
509	Computation Physics	3
511	Solid State physics (1)	3
512	Solid State physics (2)	3
513	Polymer's	3
514	Quantum field theory	3
515	Crystallography	3
516	Superconductors	3
517	Nano structures	3
518	New materials science	3
519	Liquid crystals	3
520	Ferroelectricity	3
521	Nuclear Physics (1)	3
522	Nuclear Physics (2)	3
523	Many Particles Physics	3

524	Plasma Physics	3
525	Elementary Particle Physics	3
526	High Energy Physics	3
531	Atomic and Molecular Physics	3
532	Laser Physics	3
533	Quantum Optics	3
541	Theory of Special Relativity	3
542	Theory of General Relativity	3
552	Digital Electronics	3
553	Advanced Physics Lab	3
571	Astrophysics	3
581	Biophysics	3
591	Special Topics	3
598	Research Project	3
599	Thesis	6