

Scientific supervision system on theses.

Master of Science in Physics

Department of Physics

College of Science

King Faisal University

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Introduction

The graduate program Master of Science in Physics in the Department of Physics, College of Science, King Faisal University adhere the rules, regulations and process set by the university. Those rules, regulations are derived from unified regulations for Postgraduate Studies in Saudi universities.

This booklet is an excerpt from the university manual named Unified regulations for postgraduate studies in Saudi universities and its executive rules at King Faisal University prepared by Department of Physics) . The booklet highlights the Guide, Regulations and Process of Scientific Supervision of Thesis in Master program in the department.

About Master of Science in Physics program

The master program in Physics mainly consists of thesis track.,33 units (18 credit hours in compulsory courses and 9 credit hours elective courses and 6 credit hours for thesis course) in Thesis Track. Complete detail's structure presented in below tables:

Master of Science in Physics Study Plan

(Two semesters Study Plan)

General	**Program Provider:**	**College of Science-Physics Department**
	Major:	**Physics**
	Name of Degree:	**Master of Science in Physics**
	Language:	**English**
	Duration:	**Two Years minimum**
Requirements	➢ **Satisfying the higher education council regulations for master programs in Saudi Arabia.** ➢ **Obtaining grade very good at least in the bachelor's degree in physics.** ➢ **Passing the written examination prepared by the department.** ➢ **Obtaining the English language certificate in: (TOEFL-53), (IELTS-4.5) or (STEP- 75%).**	

Study Plans	• **Thesis track (Courses and thesis)** **A student must orally defend his/her thesis to get the degree.**

Study Plans

Thesis track

Compulsory courses:

18 credit hours (6 courses) from this list must be passed.

Course Code	Courses	Credit hours		Courses	Credit hours
0814-501	Mathematical Physics I	3	0814-506	Electrodynamics I	3
0814-503	Classical Mechanics	3	0814-508	Statistical Physics	3
0814-504	Quantum Mechanics I	3	0814-551	Design of Experiments	2
0814-551	Physics self-study	1			

Elective courses:

9 credit hours (3 courses) from the list below must be passed.

Plus, 6 credit hours for the thesis dissertation.

Table 1:Elective Courses Thesis track

Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours
0814-506	Plasma Physics	Elective	0814-304*	3
0814-511	Solid State Physics 1	Elective	0814-401*	3
0814-512	Solid State Physics 2	Elective	0814-511	3
0814-509	Computational physics 1	Elective	0814-501	3
0814-514	Quantum Field theory 1	Elective	0814-504	3
0814-513	Soft condensed matter	Elective	0814-511	3
0814-516	Superconductivity	Elective	0814-511	3
0814-517	Nano Physics	Elective	0814-511	3
0814-521	Nuclear Physics 1	Elective	0814-504	3
0814-522	Nuclear Physics 2	Elective	0814-521	3
0814-523	Many Particle Physics	Elective	0814-504	3
0814-524	Plasma Physics	Elective	0814-506	3
0814-525	Elementary particle Physics	Elective	0814-504	3
0814-526	High energy Physics	Elective	0814-504	3
0814-531	Atomic and Molecular Physics 1	Elective	0814-504	3
0814-532	Laser Physics	Elective	0814-531	3
0814-541	Theory of Relativity	Elective	0814-503/506	3
0814-571	Astrophysics	Elective	0814-503	3
0814-599	MS thesis	Required		6

* Courses from undergraduate program.

Course Code	Course Title
0814-304	Electromagnetism II
0814-401	Solid State Physics

(Three semesters Study Plan)

Thesis track

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours
Level 1	0814-501	Mathematical physics	Required	0814-309	3
	0814-503	Classical mechanics	Required	0814-301	3
	0814-504	Quantum Mechanics (1)	Required	0814-411	3
Level 2	0814-506	Electrodynamics (1)	Required	0814-304	3
	0814-508	Statistical Physics	Required	0814-405	3
	0814-533	Experimental Techniques	Required	0814-511	3
Level 3	0814-5xx	3 credits (from table 1*)	Elective	0814-5xx	3
	0814-5xx	3 credits (from table 1*)	Elective	0814-5xx	3
	0814-599	Thesis	Required	---	0
Level 4	0814-5xx	3 credits (from table 1*)	Elective	0814-5xx	3
	0814-599	Thesis	Required		6

***Table 1:Elective Courses first track**

Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours
0814-506	Plasma Physics	Elective	0814-304*	3
0814-511	Solid State Physics 1	Elective	0814-401*	3
0814-512	Solid State Physics 2	Elective	0814-511	3
0814-513	Soft condensed matter	Elective	0814-511	3
0814-516	Superconductivity	Elective	0814-511	3
0814-517	Nano Physics	Elective	0814-511	3
0814-521	Nuclear Physics 1	Elective	0814-504	3
0814-522	Nuclear Physics 2	Elective	0814-521	3

0814-523	Many Particle Physics	Elective	0814-504	3
0814-524	Plasma Physics	Elective	0814-506	3
0814-525	Elementary particle Physics	Elective	0814-504	3
0814-526	High energy Physics	Elective	0814-504	3
0814-532	Laser Physics	Elective	0814-531	3
0814-541	Theory of Relativity	Elective	0814-503/606	3
0814-509	Computational physics 1	Elective	0814-501	3
0814-571	Astrophysics	Elective	0814-503	3
0814-599	**MS thesis**	Required	---	6

***Under Graduate courses:**

Course Code	Course Title
0814-304	**Electromagnetism II**
0814-401	**Solid State Physics**

Guide, Admission Requirements, Regulations and Process of Scientific Supervision of Thesis

This section enlisted the guide (rules), regulations and process of registration in thesis, selection of supervisors and completion of thesis task for the master program in Physics. The rules and regulations are suitable as per the nature of Physics program and set up of department of Physics. Further, the process adopted by the department are aligned with the system (Page 42) approved by the Deanship of Postgraduate studies in King Faisal University.

Requirements and process of Thesis Registration

Article 42

- To register a thesis, the student must complete 12 credit hours (half of the compulsory courses) with a cumulative average of no less than 3.75.
- After fulfilling above requirement a graduate students need to submit a reserach proposal along with supervisor(s) (provisionaly selected subject to approval of the department council) by using Form -1 to the Departmet's Postgraduate Studies Committee.
- After verifying all requirements (Article 43, 45-48 below) for students and as well as about supervisor(s), the Departmet's Graduate Studies Committee proposed requied changes(if any) or approved the proposal.
- Subsequently the proposal follows the approval from the Department Council, the College Council, and the Council of the Dean of Postgraduate Studies

Article 43

The topics of master's theses must be distinguished by their novelty and originality.

Rules and Regulation about Supervisor's Selection

Article 45

Full professors and associate professors from the university faculty will supervise theses. An assistant professor may supervise Master's degree theses, two years after being promoted to assistant professor, and having at least two published or accepted for publication researches in his/her field of specialization.

Implementation: The supervisor's specialization and research interests should be taken into consideration while assigning supervision.

Article 46

Scientific thesis may be supervised by non-faculty members of the university who have distinguished experience and scientific competence in the field of research, as determined by the University Council based on the recommendations of the relevant department council, the concerned college council, and the Deanship of Postgraduate Studies council.

Implementation: For a non-university supervisor for Master thesis, the supervisor must have :

I. A doctorate degree (PhD)

II. At least 3 years experience after doctoral degree.

III. At least 3 publsihed or accepted research papers in the filed of specilization.

Article 47

According to the nature of the thesis, a faculty member from another department may participate in supervising it, as long as the main supervisor is from the student's department.

Implementation:

1. The rule and its implementation mention in Article 45 must be applicable for the nomination for co-supervisor.

2. Following conditions are applicable for the nomination of co-supervisor from outside the department but within university

(a)There should be a coordination between students academic department (Physics) and the department in which co-supervisor belongs.

(b) The process stated in Article 42 also needs approval from the council of Co-Supervisors' department.

3. Following conditions are applicable for the nomination of co-supervisor from outside the university

(a) There should be a coordination between students academic department (Physics) and the department and university in which co-supervisor belongs.

(b) Upon approval of the nomination of co-supervisor, the procedure shall be completed as stated in Article 42 and Article 46 in this regulation.

Article 48

The supervisor may supervise a maximum of **four theses** at a time, whether individually or jointly, and **in exceptional circumstances**, on the recommendation of the department council and with the approval of the respective college councils and the Deanship of Graduate Studies, the number of theses may be increased to **five**. If a faculty member is the single or main supervisor, supervision of each thesis is calculated as one credit hour of his or her academic workload.

Article 49

If the supervisor is unable to continue supervising the thesis or at the end of his/her service at the university, the department proposes an alternative supervisor and is approved by the relevant college council and approved by The Postgraduate Studies Deanship Council .

Implementation: If the student's termination of the thesis coincides with the termination of the supervisor's service at the university, the supervisor will continue until the student's thesis is discussed, whenever possible.

Thesis Progress follow up and completion process

Article 50

The supervisor submits a detailed report on the student's progress in their studies to the Head of the Department at the end of each semester, with a copy to the Dean of Postgraduate Studies.

Implementation: According to the Deanship of Postgraduate Studies' academic calendar, the supervisor and co-supervisors (If any) must submit a detailed report on the student's progress in his/her research on the form prepared by the Deanship. The head of the department must approve the report, and a copy must be provided to the Deanship.

Article 51

After the student completes the thesis, the supervisor provides a report to the department's head in order to prepare for the completion of the procedures determined by the Council of the Deanship of Postgraduate Studies.

Implementation: Adherence to the procedures, controls, and forms that regulate the discussion of master's and doctoral theses, as approved by the Deanship of Postgraduate Studies' Council.

Article 52

On the basis of a report from his/her supervisor, the concerned department may issue a warning letter to a student who is not serious about his/her studies or breaches any of his academic responsibilities. If the student is warned twice and the reasons for the warning have not been avoided, the Council of the Deanship of Postgraduate Studies, based on the recommendation of the Department Council, may cancel his enrollment.

Thesis Discussion: Formation of Committee and Recomendations

Article 53

The thesis discussion committee is formed by a decision of the Council of the Deanship of Postgraduate Studies based on the recommendation of the department and college councils.

Article 54

The following are the requirements for discussion committee of the Master's thesis :

(1) The number of its members must be odd and the thesis supervisor shall be its modulator. (convener??)

(2) The Committee must have at least three faculty members, with the supervisor and co-supervisor (if any) not making up the majority.

(3) The members of the Committee must fulfill the terms of thesis supervision.

(4) Members of the committee must include at least one full professor or associate professor.

(5) The committee takes its decisions with the approval of at least two-thirds of the members.

Implementation:

1. In evaluating the student's thesis, each member of the discussion committee, including the supervisor or co-supervisor (if any), has an independent score option.
2. The Master's thesis discussion committee must have at least one member from outside the student's study department, and more preferably from outside the university.
3. During the discussion of Master thesis, the main supervisor has one vote, while co-supervisor (if any) also has one vote.

Article 56

In the event that the thesis supervisor could not participate in the discussion committee due to death or termination of his service or being on a mission abroad for a long time, the academic department shall propose a substitute supervisor, who shall be approved by the concerned College Council and endorsed the council of Postgraduate Studies Deanship.

Article 57

The discussion committee shall prepare a report to be signed by all its members and submitted to the academic department head within a week from the date of the discussion, including one of the following recommendations-

(1) Acceptance of the thesis and recommendation to award the degree.

(2) Acceptance of the thesis with some minor modifications, without discussing it again. A member of the committee is authorized to recommend granting the degree after ensuring that these modifications do not exceed three months from the date of the discussion, and the University Council may make an exception.

(3) Completing the deficiency in the thesis and re-discussing it within a period specified by The Postgraduate Studies Deanship Council based on the department council recommendation, if it does not exceed one year from the date of the discussion.

(4) Rejection of Thesis.

Within two weeks of the date of the discussion, each member of the discussion committee has the right to present different points of view or reservations in a comprehensive report to both the Department Head and the Dean of Postgraduate Studies.

Article 58

Within three weeks of the date of the discussion, the Department Head sends the report of the discussion committee to the Deanship of Postgraduate Studies.

Article 59

The Dean of Postgraduate Studies submits the recommendation to the University Council for decision to grant the degree.

Rewards for discussion committee members and supervisor(s)

Article 60

An external supervisor overseeing a Master's thesis shall be paid an amount of (SR 5000) five thousand Saudi Riyals, and an external supervisor of the doctoral thesis shall be paid (SR 7000) seven thousand Saudi Riyals.

If critically necessary, the external supervising professor may meet with the students under his/her supervision after approval of the Council of Postgraduate Studies of the University that owns the faculty member, at the request of the university which the student belongs or that requested for an external supervisor for Master's and PhD theses in the following order:

(a) Once each semester for each foreign university of which students' theses are being supervised.

(b) The universities to which they are being commissioned shall not exceed two universities each semester.

(c) Period of commissioning for assignment shall not exceed (3) days

(d) Total period of commissioning for assignment shall not exceed ten days of the full academic year for all universities.

(e) The beneficiary university shall afford the expenses of the commissioned faculty member to oversee the theses of its students according to what is designated for him/her by regulation based on his/her academic rank.

Article 61

(a) If a member of the thesis discussion committee is from the same university he/she will be paid a reward of 1000 SR (one thousand Saudi Riyals).

(b) If he/she is not a faculty member at the same university, which discusses the thesis, whether he is among the staff of that university or one invited from outside, he shall be paid a fixed reward of (SR1,500) one thousand five hundred Saudi riyals for discussing a doctoral dissertation, and (SR1000) one thousand riyals for discussing a Master's thesis. The reward shall be increased to (SR 2500) riyals if he/she is from outside the Kingdom.

(c) If the member comes from outside the city of discussion thesis university, whether within or outside the Kingdom, he/she shall be given, in addition to the reward referred above, a two-way flight, adequate accommodation and subsistence fare, for a maximum of two nights.

(d) If member is blind, or a lady, the escort or legal guardian (if any) shall be given the ticket fare in addition to the adequate housing fare, which shall not exceed two nights at the maximum.

The council of Deanship of Postgraduate studies may add one or two nights if necessary, according to the study nature, based on the recommendation of the department and college councils with clarifying the reasons for a period not exceeding two nights.

References

1. Unified regulations for postgraduate studies in Saudi universities and its executive rules at King Faisal University prepared by Department of Physics

Useful Links

1. Deanship of Postgraduates Studies, King Faisal University
2. Deanship of Scientific Research, King Faisal University
3. Deanship of Library Affairs, King Faisal University
4. College of Science, King Faisal University
5. Department of Physics

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