

## Requirements of Research Project

### a) Brief Description of Research Project

- ☒ The research project provides a demonstration of student's ability to explore, develop, and organize materials relating to a specific problem or an applied track of physics.
- ☒ The student must exhibit an ability to pursue research and investigation in a rigorous manner and to present the results in an extended scholarly statement in a clear, direct and concise manner.
- ☒ Student will be allowed to work individually or in groups.
- ☒ The student is given a wide area of freedom so that he/she is greatly contributing in determining the content of the project, the choice of the topic he/she will focus on, and to select and address the content with the aid of the supervising professor.
- ☒ The student should gather information from different scientific resources and build his/her own decision.
- ☒ The project is meant to be different from ordinary courses, the project is broadly owned by the student, which aims to develop the practical, intellectual abilities and scientific thinking.
- ☒ Student should present the project in the form of a [research report](#) (which include an abstract, introduction, results and discussion, conclusions, references) or [scientific paper](#) at the end of the 4<sup>th</sup> semester.
- ☒ The scientific standards of the project is checked by a committee formed by the department head.
- ☒ Committees to examine and discuss the research projects are formed by the department head (accredit by the department council).

- ☒ An appointment is made to discuss the research projects to be approved by the department council.
- ☒ The student makes a presentation in front of a committee and whoever wishes to attend from the members, where the members of the discussion committee evaluate the student, and the distribution of project grades will be approved by a decision of the department council after approval by the college dean.
- ☒ The project supervisor delivers a detailed list of the project to the department head
- ☒ Attendance in all classes (lessons / seminars / practical lessons / lectures / labs / online courses) is mandatory. Failure to obtain grade of  $< 75\%$  of classes usually results in failure to register the research project.

## **b) Outline of Targeted Learning Outcomes of Research Project**

After completing the research project, the graduate student should be able to

- Acquire the skills of literature review, data analysis, data interpretation, problem solving and results reporting.
- Acquire soft skills as oral presentation, communication, time management and leadership skills.
- Ability to draw conclusions through experiments or theoretical while testing a project.
- Demonstrate understanding of the ethical issues associated with research.
- Improve the problem solving, critical thinking and data analytical skills.

### **c) Brief Description of Academic Advising and Student Support Mechanisms to Complete the Project.**

- ☒ Starting from the first semester, the student chooses the track in which he wishes to specialize with the help of the academic advisor
- ☒ In the second semester, the advisor makes sure that the student chooses the courses that serve his specialty.
- ☒ If the student fails to obtain a rate of less than 2.75 GPA (out of 4.0), the student can change the track with the help of the academic advisor.
- ☒ Recording project when completed the pre-requested credit hours.
- ☒ Choose of his/her project from the supervisor's adopted projects list.
- ☒ Register his/her project title at the project committee within the allowed registration period of the first two weeks stated by the beginning of the semester.
- ☒ Choose a project that can be accomplished within the allowed project execution period, and avoid choosing unspecified titles.
- ☒ Take into account that the project is only a one semester project period.
- ☒ The academic advisor arranges a research seminar for the student in the presence of the faculty members, which deals with the research topic of the track.
- ☒ A quarterly report is written by the supervisor at the end of each level indicating the progress of the student in the research project.
- ☒ The student will be able to use the research labs of the physics department.

**a) Description of Research Project Assessment Procedures  
(Including Assessment Rubrics)**

Program title	Academic time line	Grade
Master of Physics by research project	4 <sup>th</sup> semester (research project)	-Final Report -Vivavoce evaluation
Master of Medical Physics by research project	3 <sup>rd</sup> semester (research project 1) 4 <sup>th</sup> semester (research project 2)	- Scientific paper

- ☒ A list of tasks that will comprise the project and the associated timeline/Marks for each should be maintain according to the following table:

Task	Academic timeline	Marks
Training workshops (Skills of scientific research)	Week [2]	5 %
Project proposal	Week [3]	10%
Introduction and Literature review	Weeks [4, 5 & 6]	20 %
Methodology, Data collection & Scientific design	Weeks [6, 7 & 8]	20%
Training Workshops [Graph representation]	Week [9]	Elective attendance
Data representation, Discussion & conclusions	Weeks [10, 11 & 12]	15 %
Final project form & presentation	Weeks [13 & 14]	15%
Evaluation of the project	Week [15]	10%
<b>Total</b>		<b>100 %</b>