Course Specification
(Bachelor)

Course Title:	Graduation Project
Course Code:	PHYS 499
Program:	B.Sc. in Physics
Department:	Physics and Astronomy
College:	Science
Institution:	King Saud University
Version:	2.0.0
Last Revision Date:	24 October 2023

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: 3(0+ 0 +6)					
2. Course type					
A.	☐ University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (8th level/4th year)					
4. Course general Description:					
The principal goal of the course/project is to guide the student to perform scientific project in a selected area, theoretical or experimental Physics and Astronomy, and to train her/him to write a scientific report using the necessary references.					
5. Pre-requirements for this course (if any)**:**					
Phys 490					
7. Course Main Objective(s):					

1. perform scientific project in a selected area, theoretical or experimental Physics and Astronomy.
2. Acquire scientific reasoning, logical arguments and draw conclusion supported by relevant results
3. be trained and accompanied to conduct a small project, write a short thesis, present an oral essay and a poster
4. Learn specified topic basic search.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	x	x
2	E-learning	x	x

No	Mode of Instruction	Contact Hours	Percentage
3	Hybrid • Traditional classroom • E-learning	45	100
4	Distance learning	x	x

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1	Lectures	15
2	Laboratory/Studio	--
3	Field	--
4	Tutorial	35
5	Others (specify)	--
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Approach a scientific problem,physics/astronomy topics, and subsequently interpret the related results	K1	Discussion	Write short essay\ note
2.0	**Skills**			

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
2.1	Skills for Oral and Poster presentations (assessments by an evaluation committee from the dept.)	S1	Mock viva Disucssion	Presentation, thesis and poster
3.0	**Values, autonomy, and responsibility**			
3.1	Finalizing a project Report (Purpose, Methodology, Results and their valid Scientific Interpretations).	V1	Viva	Presentation and thesis
3.2	Work as a team and acknowledge others' work.	V2	Discussion	Presentation

C. Course Content

No	List of Topics	Contact Hours
1.	Assigning Supervisors and the main project topic	**3**
2.	Collect materials and first readings (Literature and Web-based)	**6**
3.	Performing the project work steps (i.e. measurements, computations...ect)	**15**
4.	Preparing the essay and the poster.	**15**
5.	General Revision and preparation for the evaluation week.	**6**
Total		**45**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1	Interacting with the supervisor Performing duties and/or Experiments in Laboratories Internet collected information and Self-study approach of the project	Every week	60%
2	Oral Presentation	End of semester	20%
3	Scientific Poster	End of semester	10%
4	Discussion and Final Report	End of semester	10 %

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	References are selected according to the subject of the project (specified by the supervisor).
Supportive References	
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Depending on the project nature: Laboratories; Telescope (for some specified Astro. projects) Demonstration Rooms Meeting Rooms
Technology equipment (projector, smart board, software)	Computer room connected to the internet Data analysis Software (depending on the proposed topic)

Items	Resources
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students\ Peer Reviewer	Indirect \ direct
Effectiveness of Students assessment	Students- Faculty	direct
Quality of learning resources	students	Indirect
The extent to which CLOs have been achieved	Dept. Quality Committee	Indirect
Other	None	None

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Physics Department's council
REFERENCE NO.	6th (1st term/1446)
DATE	22/05/1446