

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Scientific Research Methodology
Course number	PHYS4145
Faculty	
Department	
Course type	Major Needs
Course level	4
Credit hours (theoretical)	1
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

- 1 - The Students should learn how to choose their research problem, how to collect their study samples, how to analysis their data and how to write a scientific dissertation or manuscript. The course is also directed towards orienting the students into methods and skills needed for their studies like using library facilities, using computer software, making posters and writing abstracts.

Intended Learning Outcomes

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| Knowledge and Understanding | <ul style="list-style-type: none">* To learn the ethic of scientific research and its importance* to provide students with an insight into how research in planned and executed.* 2. Apply scientific principles to solve problems and to provide defensible explanations for observations* 4. Have the ability to analyse and interpret data from a range of instrumentation, equipment and other sources* To learn different types of citations |
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Course Contents

- 1 - Ethic of scientific research
- 2 - Scientific research component
- 3 - How to read and write scientific paper
- 4 - citing references in scientific research
- 5 - Data analysis and interpretation of results
- 6 - Abstract and conclusion writing skills
- 7 - Graphics and tables in scientific paper
- 8 - Components of thesis
- 9 - Evaluating principles of scientific research
- 10 - Proposal writing skills

Teaching and Learning Methods

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| 1 - Lecture Notes and power point presentation |
| 2 - self study |
| 3 - Teacher-led group activities |

Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
Reports and Seminar Presentation	every two weeks	40%
Assignments	four times	20%
Final oral and written exam	Once	40%

Books and References

Course note	Lecture notes
Essential books	The good research guide, 4th ed. : Maidenhead : Open University Press, cop.2010. - 373 p. ISBN:9780335241408
Recommended books	Glasman-Deal, Hilary Science research writing for non-native speakers of English London : Imperial College Press, cop. 2010 - xiii, 257 s.