

Hong Kong Baptist University
Faculty of Science – Department of Physics

Title (Units): **PHYS 2015 GUIDED STUDY IN PHYSICS AND ENERGY SCIENCE I (3,3,0)**

Course Aims: This course is part of an elite undergraduate study program supervised by a faculty member in the Physics Department. The goal is to prepare the student for advanced studies and research in physics and energy science. The student should accomplish one of the following. (1) Research on a non-textbook problem, (2) acquire a research skill, (3) learn how to use a research tool, or (4) study an advanced subject in depth. The student must submit a written report at the end of the semester.

Pre-requisite: Year 2 student with good academic standing (cGPA > 3.0) or the consent of the instructor

Course Reviewed by: Dr. Changsong Zhou and Dr. Jack T.F. Ng

Course Intended Learning Outcomes (CILOs):

No.	Upon successful completion of this course, students should be able to:
1.	Develop self-learning capability.
2.	Describe knowledge of a subject for advanced studies and research.
3.	Apply a specific research skill, such as how to operate an instrument or how to perform a simulation/calculation for research.

Teaching & Learning Activities (TLAs)

CILOs	TLAs will include the following:
1,2	<i>Initial stage.</i> Students will meet instructor regularly to learn the foundation knowledge of the subject or preliminary skills.
1,2,3	<i>Independent Studies.</i> Students will be guided to complete a mission set by the instructor, which prepares the student for further studies and/or research. Student and instructor will meet regularly.
1,2,3	<i>Project presentation.</i> At the end of the semester, students are required to submit a written report and make an oral presentation. The report and presentation will be graded by the instructor and the grade will be independently reviewed by another faculty member.

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Assessment Methods (AMs):

No.	Assessment Methods	Weighting	CILOs to be addressed	Remarks
1.	Continuous Assessment	60%	1-3	Supervisor will meet student regularly to guide the study and monitor the progress
2	Written Thesis	20%	1-3	At the end of the semester, student will write a report. Supervisor and an observer will read and grade the report.
3.	Presentation	20%	1-3	At the end of the semester, student will give an oral presentation, assessed by the supervisor and the observer.

Learning Outcomes and Weighting:

Content	LO No.	Teaching (in work load)
I. Literature review and initial project planning	1	20%
II. Carry out the major task & analyzing results	1-3	40%
III. Presentation	1-3	20%
VI. Dissertation	1-3	20%

Textbook: To be specified by the instructor

References: To be specified by the instructor