Hong Kong Baptist University Faculty of Science – Department of Physics

Title (Units): PHYS 3037 GIUDED STIDY IN PHYSICS AND ENERGY SCIENCE II

(3, 3, 0)

Course Aims: As the Guided Study in Physics and Energy Science I (PHYS2015), this

course is part of an elite undergraduate study program supervised by a faculty member in the Physics Department, but in a more advanced level. The goal is to prepare the student for further advanced studies and research in a topic in physics and energy science based on the knowledge that the student has studied in previous courses or in the previous guided study. The student should accomplish one of the following in a more advanced level or greater depth. (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: PHYS 2015 Guided Study in Physics and Energy Science I 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.	Further develop self-learning capability.		
2.	Describe knowledge of an advanced subject for advanced studies and research.		
3.	Apply a specific, more advanced 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</i> stage. Students will meet instructor regularly to learn the foundation knowledge of the subject or preliminary skills.

Hong Kong Baptist University Faculty of Science – Department of Physics

CILOs	TLAs will include the following:
1,2,3	Independent Studies. 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	Project presentation. At the end of the semester, students are required to submit a written report and to 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.

Assessment Methods (AMs):

No.	Assessment	Weighting	CILOs to be	Remarks
	Methods		addressed	
1.	Continuous	60%	1-3	Supervisor will meet student regularly
	Assessment			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