

Hong Kong Baptist University
Faculty of Science – Department of Physics

Title (Units): **PHYS 4898-9 FINAL YEAR PROJECT I & II (3,0,9)**

Course Aims: All final year students majoring in Green Energy Science have to complete a project. The project may be taken as a semester-project or a year-project. It is one of the key elements in the program to train students to explore energy science in a research setting. The range of projects is diverse and each student will work independently under faculty supervision. Upon completion, the student will gain valuable hands-on experience in problem solving. He will be required to communicate his results via written texts and oral presentation.

Pre-requisite: Year 4 standing or consent of Instructor

Course Reviewed by: Dr. Liang TIAN

Course Intended Learning Outcomes (CILOs):

No.	Upon successful completion of this course, students should be able to:
1.	Formulate a project plan: Identify the project aim, review relevant literature, understand the science principles, and define the key issues.
2.	Implement the project plan, to include lab measurements or theoretical-numerical calculations.
3.	Interpret the results and draw meaningful conclusions.
4.	Communicate research findings effectively in both written and oral format.
5.	Acquire a research culture: Nurture a drive, uphold ethics, practice falsifiability, build discipline, solve problems, think creatively, and be a team player.

Teaching & Learning Activities (TLAs)

CILOs	TLAs will include the following:
1, 5	<i>Preparation</i> stage. Students will be guided through the formulation on a one-to-one basis. Assistance from the librarian may be sought.
1, 2, 5	<i>Goal setting</i> . Students will be guided to set milestones. They will be given missions rather than recipes.

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CILOs	TLAs will include the following:
2, 5	<i>Conduction of research.</i> Students are to do the lab experiments or to carry out the calculations independently. They will be assisted by their supervisors, scientific officers and other senior members of the research groups. Some students may be asked to base their project on literature research only.
3, 5	<i>Interpret findings and draw conclusions.</i> Students will be guided to draw conclusions.
4, 5	<i>Project presentation.</i> At the end of the project, students are required to give a 20-minute oral presentation and to answer questions. Subsequently, they are required to submit a written report. Typical length is 40-pages. Assistance from the Language Center may be sought.

Assessment Methods (AMs):

No.	Assessment Methods	Weighting	CILOs to be addressed	Remarks
1.	Continuous Assessment	30%	1-3	Follow the guidelines set out by the Science Faculty Project Committee
2.	Oral presentation	20%	4	Follow the guidelines set out by the Science Faculty Project Committee
3.	Written Thesis	50%	4	Follow the guidelines set out by the Science Faculty Project Committee

Learning Outcomes and Weighting:

Content	LO No.	Teaching (in work load)
I. Background readings and literature review	1	5%
II. Initial project planning	1	5%
III. Acquiring basic skills	2	10%
IV. Clearly defined thesis and well-stand problem	1, 5	10%
V. Tackling specific research issues	2, 5	30%
VI. Analyzing results	2, 3, 5	20%
VII. Oral presentation	4	10%
VIII. Written Thesis	4	10%