

The Hong Kong University of Science and Technology

PHYS3060 Syllabus

Summer 2025

Course Title: Physics Internship
Course Code: PHYS3060
Credit Points: 3
Pre-requisite: PHYS3152 or PHYS3153
Exclusion: None
Grading Scheme: Pass/Fail

Instructor:

Name: CHEUNG Man Fung
Email: cheungmf@ust.hk
Office: Rm 4444
Office Hours: Monday 1-2pm

Course Description

This course provides students with an opportunity to gain work experience in physics. Students will undertake internships in companies/organizations. For PHYS students with instructor's approval only. Graded P or F.

Intended Learning Outcomes (ILO)

On successful completion of the course, students will be able to:

1. Apply knowledge of physics and mathematics in real-life settings and make independent judgments.
2. Communicate effectively with professionals and outside audiences, in both written and oral formats.
3. Work in collaboration with professionals.
4. Utilize modern technological hardware and software relevant to physics for professional practices.
5. Synthesize internship experiences into a comprehensive report and an oral presentation that demonstrate learning outcomes and professional and personal development.

Assessment and Grading

This course will be assessed using criterion-referencing and grades will **not** be assigned using a curve. Detailed rubrics for each assignment are provided below, outlining the criteria used for evaluation.

Assessment	Assessing Course ILOs	Assessment Date
15% Midterm Report	1, 2, 4, 5	July 14, 2025
25% Final Report	1, 2, 4, 5	August 10, 2025
20% Oral Presentation	1, 2, 4, 5	August 12, 2025
40% Supervisor Evaluation	1, 2, 3, 4	End of Semester (Survey returned by supervisors)

Assessment marks for individual assessed tasks will be released within two weeks of the due date.

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Mapped ILOs	Explanation
Midterm Report Final Report Oral Presentation	ILO 1 and 2	These tasks assess students' ability to apply scientific language in work place and demonstrate ability to communicate with different audience about technical and work-related issues.
Supervisor Evaluation	ILO 2 and 3	Supervisor of the intern evaluate students' work performance and teamwork quality.

Grading Rubrics

Internship Report Grading Rubric (midterm and final report):

Criteria	Excellent (A)	Good (B)	Satisfactory (C)	Needs Improvement (F)	Weight (%)
Description of the Work	Clear, thorough description of both routine duties and specific project, demonstrating strong understanding of the role.	Adequate description of routine and project tasks, generally clear with minor details missing.	Basic description with some important details lacking or unclear.	Incomplete or vague description, lacking clarity or relevant information.	20%
Knowledge Applied	Insightful and precise explanation of how specific physics concepts or skills from HKUST have been applied.	Reasonable connection of study knowledge to work tasks with some examples.	Minimal or vague reference to knowledge applied, lacking specific examples.	No clear connection between academic knowledge and internship tasks.	20%
Knowledge Acquired	Detailed account of new skills, knowledge, and experiences gained, showing reflection and learning.	Clear mention of new learning with some examples, but less depth or reflection.	General statements about learning with limited specifics.	No clear evidence of learning or growth from the internship experience.	20%
Challenges and Solutions	Describes specific challenges with thoughtful and effective strategies used	Identifies challenges and basic approaches to resolving them.	Mentions challenges but provides limited or unclear solutions.	Challenges are not identified or no attempt to explain how they were addressed.	15%

	to overcome them.				
Expectations or Accomplishments	(Mid-term) Clear, realistic learning goals and targets aligned with internship tasks. (Final) Comprehensive summary of achievements with measurable outcomes.	(Mid-term) Specific goals stated but somewhat general; (Final) Accomplishments described with some evidence.	(Mid-term) Vague or general expectations; (Final) Limited description of accomplishments.	(Mid-term) No clear expectations; (Final) No or minimal mention of accomplishments.	15%
Clarity, Organization & Presentation	Report well-organized, logically structured, free of major errors, and easy to read. Uses professional language.	Report mostly organized with minor errors in language or structure, generally clear.	Report somewhat disorganized or contains noticeable errors that affect readability.	Poorly organized, unclear, or contains many errors that impair understanding.	10%

Presentation Rubric:

Criteria	Excellent (A)	Good (B)	Satisfactory (C)	Needs Improvement (F)	Weight (%)
Description of the Work	Clear, thorough description of both routine duties and specific project, demonstrating strong understanding of the role.	Adequate description of routine and project tasks, generally clear with minor details missing.	Basic description with some important details lacking or unclear.	Incomplete or vague description, lacking clarity or relevant information.	35%
Challenges and Solutions	Describes specific challenges with thoughtful and effective strategies used to overcome them.	Identifies challenges and basic approaches to resolving them.	Mentions challenges but provides limited or unclear solutions.	Challenges are not identified or no attempt to explain how they were addressed.	35%
Clarity, Organization & Presentation	Presentation well-organized, logically	Presentation mostly organized with minor errors	Presentation somewhat disorganized or	Poorly organized, unclear, or contains many	30%

	structured, free of major errors, and easy to follow.	in language or structure, generally clear.	contains noticeable errors that affect readability.	errors that impair understanding.	
--	-------------------------------------------------------	--------------------------------------------	-----------------------------------------------------	-----------------------------------	--

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
P	Excellent/Good/Satisfactory Performance	<p>Works more than 160 hours in the internship.</p> <p>Demonstrates</p> <ol style="list-style-type: none"> 1. Application of knowledge of physics and mathematics in internship work; 2. Effective communication with professionals and client audiences; 3. Effective collaboration with professionals; 4. Positive evaluation from internship supervisor.
F	Fail	<p>Insufficient working hours (less than 160 hours) in the internship.</p> <p>Demonstrates insufficient relevancy of knowledge in physics and mathematics or working hours in the internship work.</p> <p>Does not meet the threshold requirements for professional practice based on evaluation from the supervisor.</p>

Course AI Policy

In this course, except for examinations, you are allowed to use generative artificial intelligence (AI) to aid you for learning purposes. However, you must give proper credit for any use of generative AI.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas within two weeks of submission. Students who have further questions about the feedback including marks should consult the instructor within five working days after the feedback is received.

Resubmission Policy

Submission of assessments including report assignments will not be considered. Zero mark will be given for late submissions of the tasks.

Required Texts and Materials

None

Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to [Academic Integrity | HKUST – Academic Registry](#) for the University's definition of plagiarism and ways to avoid cheating and plagiarism.