

The Hong Kong University of Science and Technology UG

Course Syllabus

Co-op Program

CPEG 4910

6 credits

Course Description

Students in this co-op program will be engaged in practical hands-on training for a period of at least 5 months working in an organization or company that provides qualified training relevant to the computer engineering profession. Students are required to complete a final year project under the supervision of an industrial supervisor and a faculty member during the co-op. May be graded PP. For CPEG students in their third or fourth year of study only. Approval of the course coordinator is required for enrollment in the course. Exclusion(s): CPEG 4901, CPEG 4902, CPEG 4911, CPEG 4912

Intended Learning Outcomes (ILOs)

By the end of this course, students should be able to:

1. Use tools or platforms commonly used in the engineering industry in order to solve engineering and business problems in an efficient, economical, and practical way.
2. Be well-equipped to enter and become productive members of the work force.
3. Be aware of the professional practices and ethical responsibilities of engineers.
4. Gain experience applying their knowledge of mathematics, science and computer science and engineering in an industrial setting.
5. Cooperate with people from various disciplines and backgrounds to work in a team environment.

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.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)	Due date
Project proposal report	5%	At the beginning of the project (tailored based on individual student's co-op project period)
Project progress report	25%	In the middle of the project (tailored based on individual student's co-op project period)
Final project report + (Poster, 2 nd Reader Only)	40%	By the end of the project (tailored based on individual student's co-op project period)
Oral presentation	30%	By the end of the project (tailored based on individual student's co-op project period)

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

Assessments:

Assessment Task (For Supervisor: 60%)	Contribution to Overall Course grade (%)
Project proposal report	5%
Project progress report	25%
Final project report	40%
Oral presentation	30%

Assessment Task (For Reader: 40%)	Contribution to Overall Course grade (%)
Project proposal report	5%
Project progress report	15%
Final project report	35%

Oral presentation	40%
Poster Session	5%

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Mapped ILOs	Explanation
Project proposal report	ILO1, ILO2, ILO3, ILO4, ILO5	ILO1: Students research and propose tools or platforms relevant to solving a real-world engineering or business problem. ILO2: The proposal process simulates industry-style problem scoping and requirement specification. ILO3: Students define realistic project goals and constraints with consideration of ethical and professional implications. ILO4: The report demonstrates early application of academic knowledge to practical scenarios in an industrial context. ILO5: Requires initial collaboration and communication with both academic and industrial supervisors, preparing for team-based execution.
Project progress report	ILO1, ILO2, ILO3, ILO4, ILO5	ILO1: Reports ongoing application and refinement of tools and platforms in a working engineering environment. ILO2: Students reflect on real project progress and industry expectations, developing professional maturity. ILO3: Discussion of project decisions highlights ethical considerations and professional judgment. ILO4: Demonstrates mid-project technical growth and hands-on integration of knowledge into software or system prototypes. ILO5: Shows how students interact with team members or mentors, resolve conflicts, and manage responsibilities collaboratively.

Final project report + (Poster, 2 nd Reader Only)	ILO1, ILO2, ILO3, ILO4, ILO5	ILO1: Provides a full account of the tools, methods, and platforms used to address real-world problems. ILO2: Completes the training cycle, validating students' readiness to enter the workforce with practical experience. ILO3: Includes discussion on constraints, ethics, standards, and implications of the developed solution. ILO4: Consolidates technical work, data analysis, and problem-solving drawn from academic and industrial knowledge. ILO5: Reflects team collaboration, supervisory interactions, and communication across disciplines.
Oral presentation	ILO1, ILO2, ILO3, ILO4, ILO5	ILO1: Students explain the technical tools and platforms used and their suitability for solving industry problems. ILO2: Presenting complex technical work in a professional format simulates real industry communication scenarios. ILO3: Encourages students to communicate clearly and responsibly, emphasizing professionalism and ethical awareness. ILO4: Highlights how students applied academic knowledge to design and implement solutions in practice. ILO5: Demonstrates communication and coordination across multiple stakeholders including supervisors, teammates, and evaluators.

Grading Rubrics

Assessment Task	Excellent (A)	Good (B)	Satisfactory (C)	Marginal/Fail (D/F)
Project Proposal Report (5%)	Well-structured, realistic plan with relevant tools; clearly addresses all ILOs; demonstrates ethical	Good proposal with minor gaps; addresses most ILOs with relevant tools and some industry context.	Basic proposal with some structure; partial alignment with ILOs; limited application of tools or ethics.	Weak proposal with unclear goals; lacks relevance to ILOs or industry context.

	awareness and readiness for industry.			
Project Progress Report (25%)	Clear, detailed report on development, challenges, and tool use; excellent teamwork and reflection on industrial practices.	Generally clear report with good progress and team interaction; some reflection on ILOs.	Basic report with uneven coverage of progress; limited depth in reflection or collaboration.	Inadequate or unclear report; little evidence of progress or understanding of industrial context.
Final Project Report (40%)	Comprehensive documentation; deep integration of tools, technical skills, and teamwork; clear ethical and professional reflection.	Good report with appropriate technical depth and team outcomes; some discussion of ethics and industry.	Satisfactory summary with basic technical work; minimal discussion of ILOs or reflection.	Incomplete or weak report; lacks technical coherence or understanding of project goals.
Oral Presentation (30%)	Professional delivery with clear explanation of tools, methods, and team experience; confidently addresses all ILOs.	Effective communication; good structure and ILO coverage; minor presentation weaknesses.	Understandable but lacks depth or clarity in some areas; limited discussion of industry tools or teamwork.	Poorly delivered or unprepared; fails to communicate key points or demonstrate ILOs.

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
A	Excellent Performance	Exhibits exemplary mastery of professional engineering practices and workplace readiness. Uses industry-standard tools and platforms effectively to solve real engineering and business problems with efficiency and creativity (ILO1). Demonstrates strong productivity and professional maturity, showing clear readiness to contribute meaningfully in the workforce (ILO2). Consistently upholds ethical responsibilities and professional conduct (ILO3). Applies academic knowledge skillfully in an industrial context, producing impactful technical outcomes (ILO4). Works seamlessly with diverse teams, showing leadership, collaboration, and communication across disciplines (ILO5).
B	Good Performance	Shows strong understanding of engineering practices and tools, with only minor lapses in efficiency or completeness (ILO1).

		Performs reliably in workplace tasks, contributing effectively to organizational goals (ILO2). Displays appropriate ethical awareness and professional conduct (ILO3). Applies academic knowledge competently in industry, though with occasional gaps in technical depth (ILO4). Works well in teams, contributing steadily to collaborative outcomes (ILO5).
C	Satisfactory Performance	Demonstrates adequate use of engineering tools and platforms, but with noticeable gaps or inefficiencies (ILO1). Performs tasks at a basic but acceptable level, showing limited workplace readiness (ILO2). Shows some awareness of professional and ethical responsibilities, but inconsistently applied (ILO3). Applies academic knowledge to industry problems at a minimal level, with partial correctness or incomplete solutions (ILO4). Participates in teamwork but with uneven contributions or coordination challenges (ILO5).
D	Marginal Pass	Displays limited understanding of engineering practices, with frequent errors in using tools or solving industry problems (ILO1). Workplace performance is inconsistent, with minimal evidence of readiness for professional roles (ILO2). Demonstrates weak or unclear understanding of ethical and professional responsibilities (ILO3). Applies academic knowledge superficially, with major errors or incomplete outcomes (ILO4). Team contributions are weak, inconsistent, or minimally effective, requiring significant support (ILO5).
F	Fail	Fails to demonstrate minimum competence in engineering practices, workplace readiness, or professional conduct. Unable to use tools or platforms effectively to solve problems (ILO1). Shows little to no evidence of productivity or preparedness for the workforce (ILO2). Disregards or is unaware of ethical and professional responsibilities (ILO3). Fails to apply academic knowledge in an industrial context, producing incoherent or irrelevant outcomes (ILO4). Makes little or no contribution to teamwork, with ineffective or disruptive participation (ILO5).

Course AI Policy

Generative AI cannot be used to complete assessment tasks.

Communication and Feedback

Assessment marks for individual assessed tasks will be communicated via Canvas within two weeks of submission. Feedback on assignments will include strengths and areas for improvement. 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

N/A

Required Texts and Materials

All students are required to adhere strictly to the deadlines posted on Canvas. Late submissions will not be accepted under any circumstances, unless prior approval has been granted for exceptional cases. Please plan your time carefully and check Canvas regularly for assignment due dates.

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.

Additional Resources

N/A