

The Hong Kong University of Science and Technology
UG Course Syllabus

Final Year Thesis

ELEC 4901

6 Credits

Name: FYP Coordinator and individual thesis supervisors

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Office Hours: By appointment with individual thesis supervisors

Course Description

Each undergraduate student taking the Research Option of the Electronic Engineering or Computer Engineering program is required to complete an individual thesis. The thesis should summarize the student's work conducted under the supervision of a faculty member. This is an individual project spanning Summer (1 credit), Fall (2 credits), and Spring (3 credits) semesters. Students are expected to submit a proposal report, a progress report, and a final thesis, and give an oral thesis defense/presentation. The thesis requires students to consolidate and apply knowledge and skills learned in ECE/CPEG courses to solve research problems through hypothesis-driven investigation.

Intended Learning Outcomes (ILOs)

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

1. Recognize the importance and difficulties in applying learned skills/knowledge to solve research problems.
2. Understand the steps in solving a research problem from literature review to problem solution.
3. Execute a complete project from problem formulation, design/optimization, up to verification, thesis preparation and presentation.
4. Identify the novelty/contribution of the thesis.

Assessment and Grading

This course will be assessed using criterion-referencing and grades will not be assigned using a curve. During Summer and Fall semesters, students who have fulfilled the supervisor's requirements and submitted required deliverables will receive a "PP" (Permitted to Proceed) grade. The "PP" grades are superseded by letter grades (from A+ to F) at the end of the FYP period in Spring semester.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)	Due date
Proposal Report	10%	~September (Fall semester)
Execution (Progress)	30%	~January (Spring semester)
Execution (Final)	40%	~April (Spring semester)
Oral Presentation / Thesis Defense	20%	~May (Spring semester)

Note: Proposal Report is graded by the faculty supervisor (10%). Execution (Progress) is graded by the supervisor (20%) and the communication tutor/reader (10%). Execution (Final) is graded by the supervisor (20%), two judges (5% each), and the communication tutor/reader (10%). Oral Presentation/Thesis Defense is graded by two judges (10% each). Overall: 50% from Supervisor, 15% from Judge 1, 15% from Judge 2, 20% from Reader. Monthly reports and video/poster presentations must be submitted/completed but do not directly contribute to the overall grade. Penalties apply for late submissions including monthly reports.

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Mapped ILOs	Explanation
Proposal Report	ILO1, ILO2	The proposal report assesses students' ability to recognize the importance of applying learned skills to research problems (ILO1) and to understand the steps in solving a research problem from literature review to solution (ILO2).
Execution (Progress and Final)	ILO1, ILO2, ILO3	The progress report and final thesis assess students' ability to apply knowledge to research problems (ILO1, ILO2) and to execute a complete research project from formulation to verification and thesis preparation (ILO3).
Oral Presentation / Thesis Defense	ILO3, ILO4	The thesis defense assesses students' ability to present and defend a complete research project (ILO3) and to identify and articulate the novelty and contribution of the thesis (ILO4).

Grading Rubrics

Detailed rubrics for each assessment component will be provided by the FYP coordinator and individual thesis supervisors. These rubrics clearly outline the criteria used for evaluation of the proposal report, progress report, final thesis, and thesis defense. Students can refer to these rubrics to understand how their work will be assessed.

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
A+/A/A-	Excellent Performance	Demonstrates exceptional project execution with significant originality and technical depth. The final report and presentation are of outstanding quality, clearly articulating the problem, methodology, results, and contributions. Exhibits strong independent thinking, effective time management, and excellent collaboration with supervisor and team members.
B+/B/B-	Good Performance	Shows a solid understanding of the project scope and delivers a well-executed project with good technical quality. The final report and presentation are well-organized and clearly written. Demonstrates good problem-solving ability, effective project management, and the capacity to work well within a team.
C+/C/C-	Satisfactory Performance	Completes the project with adequate technical execution. The final report and presentation meet the basic requirements but may lack depth in analysis or originality. Shows sufficient effort and persistence to achieve the learning goals with some guidance from the supervisor.
D	Marginal Pass	Meets the minimum threshold requirements for project completion. The final report and presentation show limited depth and may have notable gaps. Demonstrates basic understanding but requires significant supervisor guidance throughout the project.

F	Fail	Fails to complete the project to an acceptable standard. The final report and/or presentation are incomplete or of insufficient quality. Shows inadequate effort, poor time management, or inability to apply learned knowledge to the project.
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Course AI Policy

Students may use generative AI tools as assistive tools for their research work (e.g., coding assistance, literature review support). However, the core intellectual contribution, research methodology, analysis, and writing must be the student's own work. Any use of AI tools must be properly disclosed and acknowledged in the thesis. The final thesis and defense must demonstrate the student's own understanding of the research.

Communication and Feedback

Assessment marks and feedback will be communicated via Canvas. Feedback from supervisors is provided through regular meetings throughout the project. Students who have further questions about the feedback including marks should consult their supervisor or the FYP coordinator within five working days after the feedback is received.

Resubmission Policy

Resubmission of reports is generally not permitted. Late submissions will incur grade penalties as specified by the FYP coordinator.

Required Texts and Materials

No required textbook. Research-specific references will be recommended by individual thesis supervisors.

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.

[Optional] Additional Resources

FYP Management System (FYPMS): <https://fypms.ece.ust.hk/>