Course Code   Course Title
COMP 4981   **Final Year Project**

Course Description

Students are expected to complete a project in an area of specialization in Computer Science and Engineering under the guidance of a faculty member. Objectives are to integrate the classroom material from several courses, and to apply them to solve practical problems. Credit load will be spread over the year. For students in the BEng in Computer Science and BEng in Computer Engineering programs under the four-year degree only. Exclusion(s): COMP4981H

List of Topics

N/A

Textbook

N/A

Reference books

N/A

Grading Scheme

1. All students are given an official grade of PP at the end of the Summer and Fall Terms respectively. The five components of the final letter grade have the following weighting from the advisor's perspective:

Project proposal report	5%
Individual essay	5% (graded by communication tutors)
Project progress report	20%
Final project report	35%
Oral presentation/thesis defense	30%
Monthly reports	5%
Total	100%

Letter grade with A to F will be given. The advisor may give different letter grades in each of the five components to students within the same group.

The reader will focus on the product of the project. A different set of weights are used based on the reader's perspective:

Project proposal report	5%
Project progress report	15%
Final project report	35%
Oral presentation/thesis defense	40%
Poster session	5%
Total	100%

The reader gives one letter grade for each of the five components for each project.

2. Grade Determination

- Advisors and readers grade the five components independently.
- Advisors grade the five components for each of the students in group projects. Thus, it is possible that members of the group receive different letter grades for each component.
- Readers grade the five components for the project only. Thus, all members receive the same letter grade for each component.
- The final letter grade for each student is computed by combining the letter grades given by the advisor and the reader using a advisor-reader weighting of 60:40.
- Readers may interact with advisors during the year to gain more insights on the projects.

3. The components
    - For FYP:
        - The grading scheme for the proposal report is (both advisors & readers):
            - Project objective formulation, methodology to be followed, background - 60%
            - Clarity and presentation of the report (organization, use of English) - 30%
            - Planning of future work - 10%
        - The grading scheme for the individual essay is (advisors/communication tutors only):
            - Clarity - 30%
            - Content - 30%
            - Relevance - 40%
        - The grading scheme for the progress report is (both advisors & readers):
            - Work completed - 60%
            - Clarity and presentation of the report (organization, use of English) - 30%
            - Use of software engineering techniques (concepts of initial system development, system requirement specification, system analysis specification & user interface specification are included here) - 10%

- The grading scheme for the final report is (both advisors & readers):
  - Results obtained - 60%
  - Clarity and presentation of the report (organization, use of English) - 30%
  - Use of software engineering techniques (concepts of system design specification and implementation are included here) - 10%
- The grading scheme for the oral presentation is (both advisors & readers):
  - Project demonstration - 40%
  - Delivery: Oral delivery, contact with audience, slides, timing - 40%
  - Quality of answers - 20%
- The grading scheme for the monthly reports is (advisors only):
  - Each monthly report - 33.33%
- The grading scheme for the poster session is (readers only):
  - Clarity and presentation of the poster - 50%
  - Information conveyed - 50%

Course Intended Learning Outcomes

The objectives of this course are to:

1. Provide an opportunity for the student to apply and integrate the knowledge acquired throughout his/her undergraduate study.
2. Develop the capabilities of a student in analyzing and solving complex and possibly real-case problems.
3. Develop a student's skills in the systematic development, documentation and presentation of a significant piece of work.

Assessment Rubric

Program Outcome	Component	Percentage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work (C- to C+)	Unsatisfactory (D, F)
	Individual Ethics Essay					
	CONTENT - Statement of Purpose System and goal relevant to ethics are defined. Identify the technical area of your (two) issues: dataset, software, gaming, database, vision and graphics and AI. Identify the ethical area: transparency, bias, sustainability, privacy, security, confidentiality. Key findings are stated. Two problems are identified. Two ethical solutions are given. Is there transparency in system design, data and process? Is there indication of integrity, fairness and honesty? Is the work free from bias?	40%	System goals relevant to ethical considerations are clear. Statement of Problem is well defined. Technical and ethical areas are clearly identified. Findings are discussed coherently. Problems identified are addressed with reference to integrity, transparency and bias. Key takeaways are clear.	System goals are implied and not elaborated on adequately. Either technical or ethical solutions are identified (only one) or implied. Findings are not discussed sufficiently. Problems are not discussed with reference to integrity, transparency and bias. Key takeaways are unclear.	System goals are not defined. Technical or ethical solutions are implied and not stated. Findings are not discussed coherently. Problems are not clearly stated. Key takeaways are unclear.	System goals, ethical issues and main points are not clear. Findings are not discussed. Problems are not stated. Intent is unclear.
	RELEVANCE - Addressing the Ethical Issues Analyze the ethical issues which arise from your case? Address and elaborate on the issues. What ethical rules (one or two) were breached? The issues and solutions are interpreted against a benchmark like HKIE, ACM or GDPR. Overall opinion is provided.	30%	The solutions are specifically interpreted against benchmark like HKIE, GDPR and ACM. The solutions are clearly explained in relation to system.	The solutions are generally interpreted against benchmark like HKIE, GDPR and ACM. The solutions are generally connected to the system.	HKIE, GDPR or ACM are mentioned without connecting them to solutions. The solution is not connected to the system.	HKIE, GDPR and ACM are not mentioned or are mentioned but are not relevant to the either system or ethical solutions.
	CLARITY - Logic and Cohesion Background is adequately provided (what is your work about?). Statement of purpose is clear. Logical and coherent with a good balance of description and analysis of system and ethical issues. Critical thinking based on evidence: analysis, synthesis, conclusions. Analytical essay format is used and supported with evidence.	30%	The argument is logical, coherent with a good balance of system description relevant to the ethical issues raised. Critical thinking based on evidence, analysis, synthesis and conclusions are clear. Paragraphs are well developed. The analytical essay is written based on SPSR - Situation, Problem, Solution and Response.	The argument is skewed either towards system description or ethical issues. There is evidence of two critical thinking skills - analysis, synthesis or conclusions. Paragraphs are sufficiently developed. A few parts are Analytical Essay SPSR format is evident.	System description and ethical issues are vague or not covered. There is some evidence of critical thinking skills. Paragraphs are not developed. Arguments are not based on analytical essay format.	Incoherent and lacking in structure. Opinions are personal and not based on evidence. Lack of overall clarity.

Program Outcome	Component	Percentage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work (C-
	Proposal Report				
	Project objective formulation, methodology to be followed, background	60%	The objectives are well defined and prioritized. All relevant information and constraints are obtained and accurately analyzed. Decision and design recommendation are well supported by the information.	All major objectives are identified. Sufficient information is obtained. Appropriate analyses are selected. Decision and design recommendation are reasonable and mostly supported by the information.	Most major objectives are identified but two minor ones are missing or prioriti not established. M constraints are ide some are not adeq addressed or accu analyzed. Decisio design recommen is reasonable.
	Clarity and presentation of the report (organization, use of English)	30%	Report is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that precisely express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are	Report is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the text. Sentences are mostly grammatical and only a few spelling errors are present but they do not	Report is organize topic/flow, but in areas it is difficult follow the flow of Words can be furt improved. Some diagrams are not explained. Gramn errors that imped flow of communic

Program Outcome	Component	Percen-tage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work (C-
			Progress Report		
	Work completed	60%	Progress is beyond expectations with respect to plan. Highly detailed discussions on milestones completed.	Progress is highly satisfactory with respect to plan. Detailed discussions on milestones completed.	Progress is mostly satisfactory with to plan. Some dis on milestones cor
	Clarity and presentation of the report (organization, use of English)	30%	Report is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that precisely express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are grammatical and free from spelling errors.	Report is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the text. Sentences are mostly grammatical and only a few spelling errors are present but they do not hinder the reader.	Report is organiz topic/flow, but in areas it is difficu follow the flow o Words can be fur improved. Some diagrams are not explained. Gramm errors that imped flow of communi
	Use of software engineering techniques (concepts of initial system development	10%	Employ appropriate analytical tools and/or software engineering techniques. Clearly demonstrates mastery of several areas of the	Employ appropriate analytical tools and/or software engineering techniques acquired in his course of study to the project at hand.	Employ some ana tools and/or softw engineering techn acquired.

Program Outcome	Component	Percen-tage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work
			Final Report		
	Results obtained	60%	Perform competently and in addition notice improvements that can be made to the design spec. Deliver code of exceptional quality. Plan and execute thorough list of test cases.	Develop code that follows the design spec. Develop structured code. Plan and execute list of test cases with expected result specified.	Develop code follows the de but can be fur improved. Pla execute some but not coveri possible scena
	Clarity and presentation of the report (organization, use of English)	30%	Report is well organized and clearly written. The underlying logic is clearly articulated and easy to follow. Words are chosen that precisely express the intended meaning and support reader comprehension. Diagrams or analyses enhance and clarify presentation of ideas. Sentences are grammatical and free from spelling errors.	Report is organized and clearly written for the most part. In some areas the logic or flow of ideas is difficult to follow. Words are well chosen with some minor exceptions. Diagrams are consistent with the text. Sentences are mostly grammatical and only a few spelling errors are present but they do not hinder the reader.	Report is orga topic/flow, bu areas it is diff follow the flo Words can be improved. So diagrams are explained. Gr errors that im flow of comm
	Use of software	10%	Employ appropriate	Employ appropriate	Employ some

Program Outcome	Component	Percen-tage	Exemplary (A- to A+)	Competent (B- to B+)	Needs Work
			Oral Presentation		
	Project demonstration	40%	Present a fully-functioning working product with several original/inventive elements. Show strong effort was made in breaking new ground and building excitement about the application. The demonstration techniques are imaginative and effective in conveying ideas to the audience.	Present a working product with support to all desired functions. Offer some new information or approach about the application. The demonstration techniques are effective in conveying main ideas.	Present a wo product but s functions are supported or malfunctione shows how t application v demonstratic conveys mai
	Delivery: Oral delivery, contact with audience, slides, timing	40%	Slides cover complete, accurate description of important outcomes. Effective use of charts, graphs, figures etc. Use of fluent English and confident. Hold attention by direct eye contact and nature hand gestures. Excellent timing and smooth transition among	Slides cover accurate description of most of important outcomes. Use of charts, graphs, figures etc. Fair use of English. Hold attention by consistent use of direct eye contact. Presentation runs with desired pace and finishes within allocated time.	Slides cover outcomes. Li charts, graph etc. Use of E noticeable er eye contacts Presentation well planned within alloca