

City University of Hong Kong

Information on a Course
offered by School of Energy and Environment
with effect from Semester A in 2010 / 2011

Part I

Course Title: Dissertation

Course Code: SEE6999

Course Duration: Two semesters (Sem A, Sem B or Summer Semester)

Credit Units: 6

Level: P6

Medium of Instruction: English

Prerequisites: Nil

Precursors: Nil

Equivalent Courses: Nil

Exclusive Courses: Nil

Part II

Course Aims

The aim of the dissertation is to give the opportunity to students to demonstrate their ability to carry out an independent piece of research and development work, and to develop expertise in a chosen subject area related to the program through the application of theory and techniques provided by the program. This will take the form of a substantial study in a subject area related to energy and environment, largely through the exercise of independent inquiry. In undertaking the dissertation, the student should be able to demonstrate ability to exercise judgment, independent thought, initiative, intellectual achievement, understanding of the chosen subject matter, and the principles being applied. The student will also develop and demonstrate the ability to manage and present the dissertation in a precise and coherent manner.

Course Intended Learning Outcomes (CILOs)

(state what the student is expected to be able to do at the end of the course according to a given standard of performance)

Upon successful completion of this course, students should be able to:

No.	CILOs	Weighting (if applicable)
1.	Carry out a literature survey or search of a selected subject, plan the entire project and integrate the materials principles into the project selected.	1
2.	Carry out independent research and development work, analyze and interpret data professionally.	4
3.	Demonstrate initiative, innovative abilities, and critical thinking. Be able to write a good dissertation	2

Teaching and Learning Activities (TLAs)

(Indicative of likely activities and tasks designed to facilitate students' achievement of the CILOs. Final details will be provided to students in their first week of attendance in this course)

Duration of course: The normal duration of the course is 2 semesters (Sem A/B, B/S or S/A). The student is expected to spend on average three hours per week on the project for 26 weeks. The student is supervised individually by an academic staff member of the School of Energy and Environment, through various means of communications – meetings, e-mails, etc.

TLAs	Meeting with Supervisor	Survey and Analytical Work	Report Writing	Oral Presentation	Total (hrs)
CILO 1	2	10	10	2	24
CILO 2	7	80	30	3	120
CILO 3	4	10	20	2	36
Total (hrs)	13	100	60	7	180

Scheduled activities: N/A

Assessment Tasks/Activities

(Indicative of likely activities and tasks designed to assess how well the students achieve the CILOs. Final details will be provided to students in their first week of attendance in this course)

The progress of the dissertation will be closely monitored through regular meetings between the dissertation supervisor and the student.

The oral presentation is assessed by a team of assessors, appointed by the dissertation committee, according to style, structure and clarity, and response to questions. The assessment procedures are arranged to incorporate a uniformity of treatment across the student cohort.

Each dissertation report is assessed by the assessor appointed by the project committee to each particular dissertation. The report is assessed as to presentation (clarity, conciseness), technical knowledge and understanding, and accomplishment (technical competence, initiative creativity, effort).

Grading of Student Achievement: Refer to Grading of Courses in the Academic Regulations for Taught Postgraduate Degrees.

Coursework: 100%

Examination: 0%

1. **Project Reports** include the final dissertation report and the progress reports if any.
2. **Oral Presentation** is in the form of oral presentation either as individual or group.

	Project Reports	Oral Presentation	Weighting*
CILO 1	•	•	1
CILO 2	•	•	3
CILO 3	•	•	2
Assessment Percentage	80	20	

*Weightings are assigned to the CILOs according to their relative importance to the course (3 = most important).

The grading is assigned based on students' performance in assessment tasks/activities, which in turn should be reflected in the total marks of the Dissertation (see attached Guideline).

Grade A

The student completes all assessment tasks/activities and the work demonstrates excellent understanding of the theoretical background and the working mechanisms. He/she can thoroughly identify and explain how the principles are applied to technology and management for solving energy and environment issues. The student's work shows strong evidence of original thinking, supported by a variety of properly documented information sources other than taught materials. He/she is able to communicate ideas effectively and persuasively via written texts and/or oral presentation.

Grade B

The student completes all assessment tasks/activities and can describe and explain the theoretical background and work mechanisms. He/she provides a detailed evaluation of how the principles are applied to technology and management for solving energy and environment issues. He/she demonstrates an ability to integrate taught concepts, analytical techniques and applications via clear oral and/or written communication.

Grade C

The student completes all assessment tasks/activities and can describe and explain some scientific principles. He/she provides simple but accurate evaluations of how the principles are applied to technology and management for solving energy and environment issues. He/she can communicate ideas clearly in written texts and/or in oral presentations.

Grade D

The student completes all assessment tasks/activities but can only briefly describe some scientific principles. Only some of the analysis is appropriate to show how the principles are applied to technology and management for solving energy and environment issues. He/she can communicate simple ideas in writing and/or orally.

Grade F

The student fails to complete all assessment tasks/activities and/or cannot accurately describe and explain the theoretical background and working mechanisms. He/she fails to identify and explain how the principles are applied to technology and management for solving energy and environment issues objectively or systematically. He/she is weak in communicating ideas and/or the student's work shows evidence of plagiarism.

Part III

Keyword Syllabus

There is no fixed formal syllabus. Students will be required to undertake individually supervised research and a dissertation. A departmental publication is provided giving details of requirements, timing, and considerations necessary for the successful completion, on time, of the course.

Recommended Reading

To be advised by individual supervisor based on the topics of research.

Additional Information

Refer to attached *Guidelines to SEE 6999 Dissertation*.

School of Energy and Environment

MSc Energy and Environment

Guidelines to SEE 6999 Dissertation

The course comprises of three components, namely:

Interim report	satisfactory/unsatisfactory
Dissertation thesis	80 %
Oral presentation/examination	20 %

The course shall provide students with the ability to conduct research at the highest level, and more importantly to develop a sense of practical and creative science.

During the First Semester, students are required to interact with their Primary Supervisors to identify the area of research. After a thorough literature survey, students are required to present a minimum 2-page interim report (excluding references section, 1.5 spacing, font 12, Times New Roman) on the relevant literature search as well as experimental plan and methodology (after consulting with the supervisor).

The interim report will be assessed by the Primary Supervisor as well as an independent examiner (Second Examiner) nominated by the committee. Each supervisor/examiner will only grant a “satisfactory” or “unsatisfactory”. Two “satisfactories” are required. For a mixed grade of satisfactory-unsatisfactory, the Supervisor, Second Examiner and Student are required to work out an amicable research plan before the start of Second Semester. In the case of two “unsatisfactories”, students will not be able to carry out the Second Semester component.

Students are required to attend three short lectures in the Second Semester:

1. Facts and myths of scientific research
2. To think out of the box, where is my box?
3. To write a fine thesis

Please refer to timeline for the schedule of lectures.

Each dissertation thesis will be examined by the Primary Supervisor and the Second Examiner. Difference in the assessment mark, for the part of written Dissertation thesis only, should not be more than 10 marks. In case the difference in mark is more than 10

marks, an adjudicative examiner (nominated by the committee) will be employed. The final mark will be taken as the average of the two closest, that is, within a 10 marks difference. Otherwise the case will be referred to the committee for arbitration.

Breakdown of assessment of Dissertation thesis is as follows, contributing to an overall 80 marks of the course component. This is based on the weighted average marks of the Primary Supervisor and Secondary Examiner.

i. Clarity in written communication (25 marks)

Includes organization of the flow of information leading to key results and discussion, conciseness in writing (no repetition of information), scientific and technical writing style, ability to reflect the strengths of experimental findings.

ii. Literature survey (15 marks)

Thoroughness in relevant literature review, both theories and the state-of-the-art achievements, leading to the identification of importance and urgency of research.

iii. Literature presentation (10 marks)

Systematic presentation of literature and professional referencing of scientifically-verified sources throughout the thesis.

iv. Experimental approach (15 marks)

Thoroughness in experimental work, systematic in approach, portrays skillfulness in experimental design, originality and innovations in the overall work as demonstrated by candidate.

v. Data analyses (15 marks)

Critical analysis of collected data and ability to extract new insights.

vi. Bonus (5 marks) – maximum mark for subcomponents i+ii+iii+iv is 80 marks

Ability of candidate to “think out of the box” in terms of experimental design, data presentation, critical analyses, or drawn conclusions. This needs to be accompanied by credible scientific justifications.

vii. Efforts (10 marks) - To be assessed solely by the Primary Supervisor based on the efforts carried out by the candidate throughout the course of the Dissertation.

Oral presentation/examination by candidate will be assessed by nominated academic members. The breakdown of the component is as follows, contributing to an overall 20 marks of the overall Dissertation:

- Flows and style of presentation (8 marks)
- Ability to communicate complex findings (6 marks)
- Time keeping (2 marks)
- Response to questions (4 marks)

Overall Dissertation marks and grading

Total marks allocated by the Primary Supervisor (M_{PS}): 90 marks (80 thesis + 10 effort).

Total marks allocated by the Second Examiner (M_{SE}): 80 marks (80 thesis).

Total marks allocated to oral presentation (M_{oral}): 20 marks

Overall Dissertation marks = $\frac{M_{PS} + M_{SE}}{90 + 80} \times 80 + M_{oral}$

Final grading of Dissertation will be given based on the overall weighted marks, based on written thesis and oral presentation/examination, as follows:

Overall Dissertation marks	Final grade
91-100	A+
86-90	A
81-85	A-
76-79	B+
71-75	B
66-70	B-
61-65	C+
56-60	C
51-55	C-
41-50	D
Below 40	Fail

Timeline

First semester (can be Semester A, B or summer semester):

- Interactions with Supervisor to identify areas of research and design experimentations. Interim report is due on academic week 13 (For semester A and B) or week 7 (for Summer semester).

Second semester (the subsequent semester from First semester):

Only for Semester A or B

Academic week	Agenda
1	Lecture on “Facts and myths of scientific research”
5	Lecture on “To think out of the box, where is my box?”
9	Lecture on “To write a fine thesis”
14	Student revision period
15-16	Examination period
17	Dissertation thesis due
18 (Early of the week)	Oral presentation/examination

In the case of Summer semester

Academic week	Agenda
1	Lecture on “Facts and myths of scientific research”
3	Lecture on “To think out of the box, where is my box?”
5	Lecture on “To write a fine thesis”
8	Student revision period
9	Examination period
11(Early of the week)	Dissertation thesis due
11 (End of the week)	Oral presentation/examination