

<b><i>BSE575 - DISSERTATION</i></b>	
<b>Level of Study</b>	5
<b>Credit Value</b>	9
<b>Pre-requisites</b>	Nil
<b>Co-requisites</b>	Co-requisite: ELC501 English for Post Graduate Studies
<b>Exclusions</b>	Nil
<b>Assessment</b>	Coursework: 100%

### **Aims and Approach**

The Dissertation is an individual research project that is a major piece of work undertaken by the MEng students in the MEng programme, and which is optional, but advisory for MSc students. For MEng students, the project is part of full-time studies over two semesters. For MSc students, it would normally be completed over three to four semesters. Full-time students are expected to work on a project for the equivalent of two whole days per week over two semesters (roughly 450 hours). Part-time students are expected to spend around 9 hours per week over three semesters and a summer term.

Each project shall be a piece of investigation work focused on an actual problem, in respect of design, installation, commissioning and operation of new or existing buildings of all types. In the course of the project students may be required to conduct measurements and/or undertake surveys. When required, students are expected to interact with the relevant parties/persons, such as engineers, architects, operation and maintenance staff or building occupants, in a professional and ethical manner. Confidential information shall be protected to the extent required of any parties collaborating in the project. All sources of information shall be properly referenced, unless to omitted for reasons confidentiality.

The project allows a student to demonstrate ability to:

- analyse and assimilate information from various sources, such as international standards and codes, professional guides, academic journals, conference proceedings, technical reports, etc., and to apply these in the execution of the project work;
- integrate concepts and theories, and critically evaluate outcomes of the study;
- make independent judgements and decisions;
- develop personal, inter-personal, technical and managerial skills through planning, management, co-ordination, and control of project work and interactions with others; and
- present the work logically and clearly in written and oral forms.

### **Learning Outcomes - Skills and Competencies**

Upon satisfactory completion of the subject a student should be capable of:

- working independently or lead junior staff to carry out projects in the building services engineering, facilities management, or fire and safety engineering fields requiring significant research and development to achieve a useful outcome;
- critically evaluate and integrate appropriate information, concepts and theories from various sources,;
- making independent judgements and decisions;
- present the outcomes logically and clearly in appropriate forms.

## **Project Operations**

Academic leadership for the Dissertation is provided by the Dissertation Subject Examiner (DSE). The DSE is responsible for co-ordinating all dissertations within the programme, to ensure adequate supervision, monitor student progress, and rationalise assessments.

One academic staff having research experience will be assigned as supervisor for each student. Project topics should be developed during the individual meetings with dissertation supervisors. Any major changes to the project will require the permission of the DSE, and will be subject to a feasible alternative project being development.

Regular supervisor/student meetings are scheduled to provide guidance and to monitor progress. Throughout the course of the project, the student will be required to maintain both a logbook and a project file. The logbook is for recording activities and time spent on the project. The project file, primarily in electronic format, is for the student to maintain all relevant information and data for the project, e.g.:

- meeting notes, feedback notes, correspondence, etc.,
- copies of relevant references (except copyright materials),
- site/equipment/system drawings, site/laboratory measurement data, etc.
- originals of any papers marked up with supervisor's comments.

## **Project Execution**

The finalised title, aims and objectives, and the approach to be taken in investigation will have been developed in individual meetings with supervisors. This shall be reviewed and revised as necessary within the first month of Dissertation studies. The student will present the revised work plan for confirmation by the supervisors.

After the initial stage, students are expected to carry out their project work according to plan. They are expected to consistently review their plan, to cope with any constraints on the project work that may arise (e.g. requirements from the sponsoring organisation or availability of the building site or other required resources), and to fine tune the project objectives when required, taking into account of advice from supervisors. The students are required to submit a research proposal to their supervisor, briefing the project aims/objectives, background, literature review, methodologies and references. A detailed time schedule is also needed in the proposal.

At the end of the first semester for MEng students or the second semester for part-time MSc students, the student will present an intermediate report at an oral presentation, which will be assessed by a panel of BSE staff, normally comprising the DSE and supervisors. The report shall cover progress, preliminary findings and a plan for ongoing work for the following semester. Each presentation will be limited to 20 minutes and followed by a question/answer session of 10 minutes. A high standard of presentation is expected, including use of English. Projection facilities are provided but students are expected to choose the media to be used.

In addition, students will submit a progress report to the supervisors, which will also be assessed. It is expected to be of a standard similar to a technical note in an academic journal.

In the final semester, students will submit a draft of their dissertation for assessment and will present their work for oral examination attended by BSE staff, and possibly invited guests from industry and any sponsoring organisations. The supervisors and a second independent assessor will assess the Dissertation. Each student will also give a 20-minute oral presentation of his/her findings to a panel, followed by a 10-minute session for questions and answers. Organisation for the oral presentations will be similar to the interim presentation.

The DSE will make the final recommendation on the overall assessment for each student and will report the assessment procedure and outcomes to the SARP.

## Project Schedule

MEng	Semester 1	Semester 2
	Research proposal (10%) Progress report and Intermediate Presentation (20%)	Dissertation (40%) Oral examination (20%)
	←————— Project meetings and Project File —————→ (10%)	

## Assessment Key

Assessment of performance of each student in his/her project work will be made on the basis of presentations at seminars, continuous assessment made by the supervisors on the student's work throughout the year, and a Dissertation. Details of the assessment are as follows:

Stage	Deliverables	Assessors	Assessed Items	Weighting
Initial submission (1 <sup>st</sup> semester)	Project Proposal	Supervisors	Development of project theme, critical evaluation, work plan for next stage. Communication skills to be assessed.	10%
Interim submission (1 <sup>st</sup> semester)	Progress Report	Supervisors		8%
	Oral Presentation	Group of staff		12%
Final submission (2 <sup>nd</sup> semester)	Presentation	Group of staff	English and presentation, clarity of arguments, response to questions.	20%
	Project Progress	Chief supervisor	Project development, planning and execution, critical evaluation and analysis, initiative and organization.	10%
	Dissertation	At least two academic staff members	English and presentation, method and results, argument and conclusion.	40%