Project Guidelines

ENNGEN 765A (15 points) and 765B (15 points): Project in Engineering Management

Structure and Purpose

The double-semester Project in Engineering Management (Project M) is a core component and the culmination of the MEMgt programme. It is comprised of two courses, ENNGEN 765A and ENNGEN 765B, both of which must be completed in two consecutive semesters in order to satisfy the MEMgt programme requirements. There is no examination or submission requirement for ENNGEN 765A, but a student must be enrolled in this course before approval is given to enrol in ENNGEN 765B. At the end of their enrolment in ENNGEN 765B students will need to submit two reports, which cover their Project M from two different perspectives (see below).

Project M is designed to provide students with the opportunity to apply the engineering management concepts and tools they are exposed to during their MEMgt study course in a familiar business environment (generally their current workplace or a business that they are familiar with and have full access to). The project is aimed at allowing students to develop and apply their management skills, enabling them to experience and reflect on their role as an engineering manager in a practical, real-life context, and giving them the opportunity to demonstrate their newly-acquired management competence to their current or future employer.

Host Company Requirements

As these Project M objectives are such an important and critical element of the MEMgt programme, students are required to provide evidence of the consent of a company willing to host their Project M before they can be admitted into the programme. All students are expected to use their own initiative to arrange a suitable project with a local company.

International students are advised to formally apply for admission to the MEMgt programme, and should they meet the admission criteria, they will receive a conditional offer. If the condition of finding a company to host Project M has not been met, the Faculty of Engineering’s Employment Manager can be contacted via email at k.healey@auckland.ac.nz, for advice about contacting potential host companies. Please note that finding an appropriate host company is fully the responsibility of the applicant, and the Faculty will only provide advice in this area. A formal letter of introduction from the MEMgt Programme Convenor when approaching organisations for a project can be provided on request.
**Project M Prescription**

The prescription for Project M states: “A candidate will be required to complete a major project undertaken on an individual basis and supervised by the MEMgt Programme Convenor. This project should relate to a practical situation in an organisation or company selected by the candidate. The project may take the form of a survey and evaluation of modern advances in engineering management practices, the development of new management strategies, industrial case studies, or the development of an engineering management oriented computer software package.”

**Enrolment in Project M**

While evidence of the consent of a company to host the Project M needs to be provided with a student’s initial application for admission into the MEMgt programme, students also need to apply for approval before they are allowed to enrol in ENNGEN 765A, the first component of Project M. (Note that for full-time students this will be required at the start of their first semester in the programme.) They will be asked to complete and submit an Enrolment Approval Form for MEMgt Projects (available from the Engineering Student Centre or by email from the Programme Convenor), which includes a brief outline of their proposed project. This project outline should have a maximum length of about 500 words and must include project title, host company and contact person, project background, objectives, planned methodology and expected outcomes.

**Project Scope and Submission Requirements**

At the end of their enrolment in ENNGEN 765B students need to submit two reports which cover their Project M from two complementary perspectives. The first is a ‘Company Report’, which is like a consulting report to their host company. The second is a ‘Research Paper’, which concentrates on the academic/theoretical aspects of the same project. Both components are weighted equally (i.e. 15 points each).

**Company Report**

The Company Report is a working document aimed specifically at providing the host company with project information, results and recommendations which will be of use to them in their operations. Its maximum length should not exceed 12,000 words, excluding appendices. Where a project report contains confidential information, and/or its disclosure could be harmful to the host company, confidentiality will be assured. Such reports will be seen only by the project supervisor and a second University assessor.

The required format of the report, including content options, is as follows:

(a) **Title Page**

This should include title, author, date, and descriptive statements such as: "The Engineering Management Project M Report presented to the University of Auckland by ..... in partial fulfillment of the requirements for the award of the Master of Engineering Management". If the project is confidential, a statement to this effect should also be made on the Title Page.

(b) **Executive Summary**

This is an abstract of the project which includes the project objectives, approach, major conclusions and recommendations, and any special comments. It should not normally exceed one page.
(c) Table of Contents
(d) Acknowledgements
(e) Body of the Report
(f) List of References
(g) Bibliography (if applicable)
(h) Glossary of Terms (if applicable)
(i) Appendices (if applicable).

For further advice on report writing and formatting, refer to the book “Writing for Science: A Practical Handbook for Science, Engineering and Technology Students”, Heather Silyn-Roberts, Auckland, Prentice Hall/Pearson Education, 3rd edition 2012, which is available in the Engineering Library. An example of a typical Company Report can be viewed at this link (note that this example is not necessarily an A grade report).

One copy of the Company Report should be printed (preferably double-sided), soft-bound, and submitted to the Faculty of Engineering Student Centre by the due date, and an electronic copy emailed to the Programme Convenor or project supervisor.

Research Paper

In addition to the Company Report, a "Research Paper" needs to be prepared in accordance with good academic standards. This Research Paper generally deals with the same project topic and subject matter as the Company Report, but presents the information from a more academic perspective. It should demonstrate how relevant literature, theoretical criteria and considerations, models or concepts raised by the project have been addressed in the project.

While it is not expected that new theories are developed in the Project M, it is required that the project be set in a sound academic as well as a practical context. Therefore, concepts or models relevant to each analysis or decision making situation should be reviewed and the most appropriate chosen for application in the project setting.

The research paper therefore covers the theories and methodologies used in conducting the study as well as the main conclusions arrived at. It must be presented in a generic manner without disclosing company details, and should be written to a standard suitable for publication in an academic journal or conference. Its length should normally not exceed 5,000 words including references. The style of the Research Paper should follow the guidelines given in the following template: http://spie.org/Documents/Publications/ProcSampleManuscript-A4.pdf. An example of a typical Research Paper can be viewed at this link (note that this example is not necessarily an A grade submission).

The paper, if eventually considered suitable for publication, will be co-authored by the student and the supervisor with the student assuming the major authorship while the supervisor, following assessment, will provide appropriate input and advice to ensure the integrity of the finished manuscript. Submission of the paper by the student implies that it contains original work which has not been published previously.

One copy of the Research Paper should be printed (preferably double-sided) and stapled, and submitted to the Faculty of Engineering Student Centre by the due date, and an electronic copy emailed to the Programme Convenor or project supervisor.