Appendix 1

PROGRAMME SPECIFICATION DOCUMENT

1. Qualification	2. Programme Title	3. UCAS Code	4. Programme Type
BSc (Hons)	Engineering Management	UNIVERSITY.	Single Subject Part Time & Full Time

5. Main Purposes and Distinctive Features of the Programme

Engineering Management is a term that is used to describe a specialised form of management that is required to successfully lead engineering personnel and projects. The term can be used to describe either functional management or project management; however, in either case, successful engineering managers require training and experience in both general management and the specific engineering disciplines that will be used by the engineering team to be managed.

The purpose of this programme of study is to educate HE Diploma/Foundation Degree/HND level engineers to Honours level competence standards, thereby preparing them for professional employment in the Engineering industry at managerial level.

The aim of the programme is to supplement the student's existing engineering skills and knowledge with an understanding of management principles and their application in an engineering setting.

The learning outcomes of this programme of study are consistent with the graduate attributes and competency profiles for professional engineers identified in the Washington Accord of the International Engineering Alliance (IEA). They also meet the generic and management-related requirements contained within the UK Standards for Professional Engineering Competences (UK-SPEC). These standards are in line with the QAA framework and benchmarking for an engineering programme. The scheme also comes under the requirements and standards of the University of Bolton.

It is the intention of this programme that it will produce graduates that are:

- motivated to practice engineering management
- enthusiastic, articulate, questioning and open-minded
- recognised nationally and internationally as highly competent engineering management graduates
- aware of the financial, moral, legal, economic, environmental and cultural constraints in which they operate
- aware of current management practice
- committed to and prepared for lifelong learning

In doing so, the programme aims to:

- establish the relevance of engineering management to real world problems
- incorporate health and safety, environmental issues and sustainability
- ensure content matches the needs and developments in modern industry and society
- encourage reflection on learning experiences
- develop analytical skills and the application of those skills
- involve breadth and depth of coverage to meet the needs of industry and society in management and business topics
- encourage a process of personal development planning (pdp)

6. What a graduate should know and be able to do on completion of the programme

Knowledge and understanding in the context of the subject(s): *The student will:*

K1 Demonstrate an understanding of the role of engineering in society

K2 Demonstrate knowledge and understanding of the commercial and economic context of engineering processes

K3 Demonstrate knowledge and understanding of management and business practices, and their limitations, and how these may be applied appropriately to strategic and tactical issues in engineering organisations.

K4 Have an understanding of the requirements for engineering activities to promote sustainable development.

K5 Have an awareness of the framework of relevant legal requirements governing engineering activities, including personnel, health, safety and risk issues.

K6 Have an understanding of the need for a high level of professional and ethical conduct in engineering.

K7 Engage with selected knowledge in the research literature of the discipline

Subject-specific practical/professional skills: *The student will;*

S1 Apply engineering management principles to manage projects

S2 Be aware of the nature of intellectual property rights and contractual issues.

S3 Have an understanding of appropriate codes of practice and industrial standards.

S4 Have an awareness of quality issues.

S5 Have the ability to apply engineering techniques taking into account a range of commercial and industrial constraints.

Intellectual abilities in the context of the subject(s): *The student will:*

I1 Define, investigate and analyse complex problems

I2 Design or develop and assess alternative solutions to complex problems

I3 Evaluate the outcomes and impacts of complex activities

Other skills (e.g. key/transferable) developed in subject or other contexts: *The student will:*

O1 Function effectively as an individual and as a member or leader in multidisciplinary teams

O2 Communicate effectively, such as being able to comprehend and write effective reports and documentation, make effective presentations, and give and receive clear instructions.

O3 Recognise the need for, and have the preparation and ability to engage in independent and life-long learning.

Transferable Skills are also encountered throughout the programme and depending upon the activity, type of assessment and/or the learning outcomes, these will be either taught, developed and/or assessed.

Assessment Methods
Assessment is via formative and summative exercises and activities linked to the learning outcomes for each module. Assessments take place throughout each year and take various forms; Project reports, Presentations, Viva Voce examinations, Open-book and Closed-book examinations, Case Study Exercises, Essays, etc.

Assessment Classification System
The pass mark for an individual module is 40%.

The final degree classification is based on aggregate performance in all level HE6 modules.

BEng Honours Classification Bands:

≥ 70%	First Class Honours
69% > 60%	Upper Second Class Honours
59% > 50%	Lower Second Class Honours
49% > 40%	Third Class Honours
≤ 39%	Fail

10. Other Information *(including compliance with relevant University policies)*

Date programme first offered

January 2011 (Singapore)
September 2011 (UK)

Admissions Criteria

Standard Requirements

- DipHE, HND, Foundation Degree, or equivalent, in an engineering-related discipline
- IELTS 6.0 or equivalent

Non Standard Entry

- Applicants may gain entry to the course by consideration of prior learning or experience and by interview. Such applicants will need to demonstrate significant experience and achievement to a standard equivalent to level HE5.

Indicators of Quality and Standards

- Validation Panel comments and recommendations.
- Comments and recommendations from external examiners.
- QAA Benchmarking statements & IEA Washington Accord/UK-Spec Learning Competencies
- Compliance with University regulations and guidelines.
- Retention and Progression statics.

Implementation of PDP Policy
Personal Development Planning is dealt with throughout the programme, in particular in the Investigatory Studies and Project modules.