Admission Requirements

i. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.750 or;
ii. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.500-2.749 with at least 3 years of working experience in relevant field or;
iii. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.250-2.499 with at least 5 years of working experience in relevant field or;
iv. Bachelor in any related field of Science or Technology with CGPA of 3.000 or;
v. Bachelor in any related field of Science or Technology with CGPA of 2.750-2.999 with at least 3 years of working experience in relevant field or;
vi. Bachelor in any related field of Science or Technology with CGPA of 2.500-2.749 with at least 5 years of working experience in relevant field.

Note: Candidates with Bachelor of Science or Technology degrees or their equivalents are admitted, prerequisite modules in Engineering must be offered to adequately prepare them for their advanced study.

Language Requirements

International candidates are required to fulfill English language requirement as follows:

a) 550 for TOEFL Paper-based Test (Academic Version); or
b) Band 6.0 for IELTS (Academic Training); or
c) 79-80 for TOEFL Internet-based Test (Academic Version).

Candidate without the requisite minimum score for TOEFL or IELTS may be granted a provisional admission. Such candidate will be required to pass an English Placement Test conducted by the University.

Fees

Fees	Master without thesis	
	Malaysian Student	International Student
Basic Fees (1st semester)	**RM 1,425**	**RM 2,475**
Basic Fees (2nd and subsequent semester)	**RM 1,175**	**RM 2,225**
Credit Fees * subject to change	RM 250 / credit	RM 400 / credit

APPLICATION

Please apply online via:

http://sgsportal.upm.edu.my:8080/sgsportal
www.sgs.upm.edu.my/prospective_students-2964

For further information, please contact :

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MASTER OF ENGINEERING MANAGEMENT

Department of Mechanical and Manufacturing Engineering
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INTRODUCTION

Engineering Management is concerned with the design, improvement, and implementation of integrated systems of people, material, information, equipment, and energy. It draws upon specialized knowledge and skills in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results obtained from such systems.

PROGRAMME REQUIREMENTS

Credit Requirements for Graduation

Students enrolling under this programme must fulfill 40 credits of courses to graduate. The credit distributions for compulsory courses, elective courses and project are as follows:

- Compulsory Courses 24 credits
- Elective Courses 6 credits
- Dissertation 10 credits

Compulsory Courses

Students must take all the listed compulsory courses;

EMM5100	Research Methodology	3 credits
EMM5602	Total Quality Management	3 credits
EMM5604	Industrial Marketing Management	3 credits
EMM5606	Manufacturing Operation Management	3 credits
EMM5608	Industrial Organisation Management	3 credits
EMM5616	Industrial Safety, Health and Environmental Management	3 credits
EMM5628	Financial Analysis for Engineers	3 credits
EMM5630	Project and Risk Management in Engineering	3 credits
EMM5990	Dissertation	10 credits

Note: EMM5990 - Students are recommended to register 4 credits in the second semester and another 6 credits in the third semester. Student will be assessed by a panel of examiners based on the submitted report and oral presentation at the end of the dissertation duration.

Elective Courses

Students must take only two elective courses (2 credits) out of the listed below;

EMM5614	Maintenance Management Systems	3 credits
EMM5620	Value Engineering	3 credits
EMM5624	Supply Chain Management	3 credits
EMM5626	Technology Management	3 credits
EMM5702	Advanced Manufacturing Technology and Processes	3 credits
EMM5706	Design of Manufacturing Systems	3 credits
EMM5714	Facilities Layout	3 credits

Identification on the elective courses for the student will be made by the program coordinator.

Course Synopsis

EMM5100 | Research Methodology | 3 Credits

This course covers best practices in research such as research methodology, design and ethics as well as academic writing and oral presentations.

EMM5602 | Total Quality Management | 3 Credits

This course prepares students to identify the role, importance, implementation and contribution of total quality in industry. It also prepares students to apply methods and techniques to help upgrade quality continuously in an organisation

EMM5604 | Industrial Marketing Management | 3 Credits

This course covers the difference between industrial or business-to-business (B2B) marketing with consumer marketing. This course also discusses the concepts of core marketing in industrial markets, design and performance evaluation through various marketing approaches. The discussion also includes generic marketing strategies and marketing tools used in the development of marketing mix in the industrial markets.

EMM5606 | Manufacturing Operations Management | 3 Credits

This course provides students with concepts, methodology and tools to analyse, improve core operational capabilities, and apply them in manufacturing business organisations. It also emphasizes on the strategic decision-making to ensure successful transformation of inputs to outputs in an efficient manner, simultaneously meeting customer requirements.

EMM5608 | Industrial Organisation Management | 3 Credits

This course covers the principles and concepts of efficient management in decision-making and impacts of environmental forces. The emphasis is also given on the responsibility of the leader or manager in planning, organizing, leading, controlling and planning changes to an organizational.

EMM5614 | Maintenance Management Systems | 3 Credits

This course provides students with techniques and strategies to analyse profitability performance, production capacity and equipment reliability in the maintenance management. It also emphasizes on the importance of the maintenance planning and control with various best practices to achieve organizational requirements.

EMM5616 | Industrial Safety, Health and Environmental Management | 3 Credits

This course covers assessments on safety, health and environmental management, which include the identification and control of hazards in the workplace and the human variables involved in causing and preventing accidents. It also discusses the relevant laws, regulations and standards as they apply to workplace safety and health and relevant issues in promoting safety and health in the organization.

EMM5620 | Value Engineering | 3 Credits

This course covers the background of value engineering (VE), the principles of VE, the difference between VE and other improvement techniques, the VE framework includes 7 phases of the VE framework. This course exposes students to the use of various analytical techniques especially function analysis in synergistic team.

EMM5624 | Supply Chain Management | 3 Credits

This course covers the basic understanding, system development and application of supply chain management. This course also emphasizes the importance of implementing effective supply chain management in organizations.

EMM5626 | Technology Management | 3 Credits

This course provides student with recent technology in planning for the new product development. It emphasizes on the planning development method for technology management and creativity in the making of new product. It is also comprises of technology management concept in decision making.

EMM5628 | Financial Analysis for Engineers | 3 Credits

This course covers the analysis of financial statement of business organizations based on capital and operating expenditures, analysis of breakeven points to determine selling price. This course also discusses investment planning and strategic financial decision making for engineering project.

EMM5630 | Project and Risk Management in Engineering | 3 Credits

This course covers the elaboration of project and risk management in engineering. This course also prepares students with the method to construct project proposals with regard to risks in project development. Project control and implementation methods are emphasized to ensure the objectives, time and cost of the project can be achieved.

EMM5702 | Advanced Manufacturing Technology and Processes | 3 Credits

This course provides the students with concepts, methods of material selection and manufacturing processes using the latest technology by considering the requirements and specifications to produce sustainable products. This course also emphasizes on the development of production technology and effective testing methods to produce quality products.

EMM5706 | Design of Manufacturing Systems | 3 Credits

This course provides the students with concepts, structured methodology and effective tools to analyse, improve operational processes, and apply them in designing the manufacturing system. It emphasizes on the efficient evaluation to ensure the built-in manufacturing system can optimizes the production yields and produces quality products.

EMM5714 | Facilities Layout | 3 Credits

This course provides students with planning, facilities layout design, flow analysis and activity relationship analysis for the development of facilities layout. Conventional technique and modern computating are applied in designing facilities layout to reduce the flow of material handling at minimal cost.

EMM5990 | Dissertation | 10 Credits

This course involves a research or study by a student on a specific topic. It covers literature review, methodology, data collection and analysis under a supervision of a lecturer. A proposal report needs to be prepared at the beginning of the study. At the end of the project, the student will submit a complete dissertation and research output for evaluation. The student is also required to present the findings of the study to a panel of assessors.