

Module Code	MEU44B06
Module Name	Manufacturing Systems and Project Management
ECTS Weighting¹	5 ECTS
Semester taught	Semester 2
Module Coordinator/s	Dr. Shuo Yin and Dr. Garret O'Donnell
Module Learning Outcomes with reference to the Graduate Attributes and how they are developed in discipline	On successful completion of this module, students should be able to: Learning outcome for Manufacturing Systems 1. describe manufacturing planning and control strategies (e.g. MRP, MRP II, JIT); 2. construct a materials requirement plan from a bill of materials and master schedule using finite and infinite capacity; 3. assess the influence of costs on a plan; 4. link DFM and layout strategies with production planning and control; 5. identify the key differences between product and process layouts; 6. identify and quantify key metrics for creating manufacturing cells; Learning outcomes for Project Management 7. define objectives and deliverables in a project environment; 8. understand the role of project management in contemporary business practice; 9. write a project proposal including preliminary budgets and project controls; 10. apply planning methods including resource, time and cost planning; 11. understand quantitative tools for risk assessment 12. use graphical methods for presenting project schedules and plans; 13. utilize contemporary techniques and technology for project management; 14. apply module material to a project using MS Project software. Graduate Attributes: levels of attainment To act responsibly - Not embedded To think independently - Attained To develop continuously - Introduced To communicate effectively - Not embedded

Module Content

This module provides a general introduction to operations management of manufacturing systems. It will explore strategies for operating and optimising the production of products in different varieties and volumes with limited resources and in competitive environments. The impacts of design decisions on manufacturing performance and the physical organisation of plants are explored through various DFM and plant layout strategies. Formal project management methods will be introduced reflecting the growing use of continuous improvement through project management.

Teaching and Learning Methods

The module encompasses a diverse range of teaching and learning strategies. The module is taught using a combination of lectures, assignments, and tutorials. The bulk of the module material (notes, tutorials) are provided as handouts. There is a group based tutorial project developing skills in computer-based Project Management.

Assessment Details² Please include the following: • Assessment Component • Assessment description • Learning Outcome(s) addressed • % of total • Assessment due date	Assessment Component	Assessment Description	LO Addressed	% of total	Week due
	Continuous Assessment	Assignment + group work	LO 1-14	100	14
Reassessment Requirements	As this course is 100% continuous assessment and involves substantial group work, supplemental examination will have to be discussed with lecturer				
Contact Hours and Indicative Student Workload²	Contact hours: 44				
	Independent Study (preparation for course and review of materials): 5				
	Independent Study (preparation for assessment, incl. completion of assessment): 5				
Recommended Reading List	• Operations Management, Slack, Chambers, Harland and Johnston, 3rd edition, Pitman, 2003 • Production and Operations Management, Heizer and Render, 3rd or later edition, Allyn and Bacon, 2002 • Manufacturing Planning and Control Systems, Vollman, Berry and Whybark, 4th edition, McGraw Hill, 1997				
Covid-19 contingencies	The face-to face teaching will be moved to online teaching if Covid-19 outbreaks again.				
Module Pre-requisite	N/A				
Module Co-requisite	N/A				
Module Website	N/A				

Are other Schools/Departments involved in the delivery of this module? If yes, please provide details.	No
Module Approval Date	02/07/2020
Approved by	Nicole Byrne
Academic Start Year	2020
Academic Year of Date	2020-2021