

WM9H3-15 Management for Global Manufacturing Operations

23/24

Department

WMG

Level

Taught Postgraduate Level

Module leader

Mucahit Ozden

Credit value

15

Module duration

3 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

Description

Introductory description

Even the best manufacturing system design is useless unless it is operated and managed effectively. Increasingly, factories of the future will incorporate many cyber-technologies that take over some of the planning and management tasks currently done by humans. This module will introduce conventional Operations Management and then explore the potential impact of cyber-technologies on this, including its impact on inter-firm collaborative or networked production on a global scale.

Module aims

Learners will be able to use theory and models to evaluate the relationship between manufacturing system design and operations management for existing technologies and tools, and use theoretical frameworks to make judgments about the impact of cyber-manufacturing on operations within and between collaborating organisations across international boundaries.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be

covered. Actual sessions held may differ.

Production Planning and Control,
Forecasting,
Capacity Management,
Inventory Management;
Foundations of financial analysis and control/management accounting;
Principles of supply chain management;

Learning outcomes

By the end of the module, students should be able to:

- Comprehensively understand the strategic importance of the links between key operations management aspects and how to manage them to achieve good operational performance.
- Contrast conventional manufacturing and cyber-manufacturing in terms of planning and execution by considering opportunities and threats..
- Examine the effect that cyber-manufacturing has on investment appraisal and cost accounting.
- Critically evaluate cyber-manufacturing in global supply chains.

Indicative reading list

Operations Management , Slack N., Brandon-Jones, Peason 2019;
Sustainable Transportation and Smart Logistics: decision-making models and solutions, Elsevier, 2019;
Manufacturing Operations Strategy, Hill T. Palgrave. 2009;
Accounting and Finance for Managers: decision making approach. Bamber & Parry, Hodder, 2018.

Subject specific skills

Construct a production schedule under constraints of resource capacity, material and time;
Calculate common measures of operational performance;
Perform a basic investment appraisal calculation; for example, NPV.

Transferable skills

Dealing with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences;
Independent learning ability required for continuing professional development.

Study

Study time

Type	Required
Lectures	18 sessions of 1 hour (12%)
Seminars	12 sessions of 1 hour (8%)
Online learning (independent)	42 sessions of 1 hour (28%)
Other activity	18 hours (12%)
Assessment	60 hours (40%)
Total	150 hours

Private study description

No private study requirements defined for this module.

Other activity description

Unsupervised group work

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A1

	Weighting	Study time
In Module Activity	20%	12 hours
Working in small groups, students will analyse a manufacturing scenario and evaluate the risks and opportunities associated with the inclusion of cyber-manufacturing technologies on operational performance.		
In Module Group Tasks	10%	6 hours
Students will complete in-module tasks in groups of 5 or 6.		
Post Module Assignment	70%	42 hours
An individual essay focuses on the opportunities and threats that cyber-manufacturing brings, examine the cyber-manufacturing related decision making process and critically evaluates the pros and cons of cyber-manufacturing in global supply chains.		

Assessment group R

	Weighting	Study time
Resubmission Post Module Assignment	100%	
An individual essay to assess all learning outcomes.		

Feedback on assessment

Following completion of both in module activity and in module group tasks, a verbal feedback including will be provided. For the post-module assignment, they will receive individual written feedback.

Availability

There is currently no information about the courses for which this module is core or optional.