

WM9H3-15 Management for Global Manufacturing Operations

22/23

Department

WMG

Level

Taught Postgraduate Level

Module leader

Mucahit Ozden

Credit value

15

Module duration

3 weeks

Assessment

100% coursework

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 techniques and technologies;
Inventory Management;
Operations strategy;
Foundations of financial analysis and control/management accounting;
Principles of supply chains and their management;
Cyber-technologies and their impact.

Learning outcomes

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

- Contrast the strategies used to direct conventional manufacturing with the goals and objectives of global cyber-manufacturing
- Contrast the methods used to plan and execute conventional manufacturing with the opportunities and threats that cyber-manufacturing brings
- Examine the effect that cyber-manufacturing has on investment appraisal and cost accounting
- Critically evaluate the pros and cons of cyber-manufacturing in global supply chains.

Indicative reading list

Operations Management , Slack N., Brandon-Jones, Pearson 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	14 sessions of 1 hour (9%)
Seminars	6 sessions of 1 hour (4%)
Practical classes	3 sessions of 1 hour 30 minutes (3%)
Supervised practical classes	2 sessions of 1 hour 30 minutes (2%)
Online learning (independent)	21 sessions of 30 minutes (7%)
Other activity	12 hours (8%)
Assessment	100 hours (67%)
Total	150 hours

Private study description

No private study requirements defined for this module.

Other activity description

company visits where available, peer and individual activities for transition between weeks and modes of learning: construction, application and consolidation. For example Wikis and other collaborative tasks aimed at

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group A

	Weighting	Study time
In Module Activity	20%	20 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, comparing this with the strengths and weaknesses of conventional operations management.		
Post Module Assignment	80%	80 hours
An individual essay exploring that contrasts the methods used to plan and execute conventional		

Weighting

Study time

manufacturing with the opportunities and threats that cyber-manufacturing brings and critically evaluates the pros and cons of cyber-manufacturing in global supply chains.

Feedback on assessment

Pro-forma feedback on the in-module group presentation will be given immediately after the presentations are made. A short written piece will be given within days after the presentation for the cohort as a whole . A combination of group and individual written feedback will be provided for the post-module individual essay.

Availability

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