

WM192-15 Management and Quality

24/25

Department

WMG

Level

Undergraduate Level 1

Module leader

Piotr Mazurkiewicz

Credit value

15

Module duration

14 weeks

Assessment

60% coursework, 40% exam

Study locations

University of Warwick main campus, Coventry Primary

Distance or Online Delivery

Description

Introductory description

This module provides the fundamental knowledge in both Management and Quality, relevant to Degree Apprenticeship Standards ST0023, ST0024, ST0025 and ST0027.

The module covers a wide range of topics around management principles in the engineering business operations context, including planning, organising, leading, and controlling processes to achieve desired outcomes efficiently.

Furthermore the module introduces students to the theory of the Quality management aiming to appreciate an aim to enhance organisational performance, ensure customer satisfaction, and foster continual improvement, underpinned by a systematic and integrated approach to quality management.

This module is linked to C4, C14, C15 and C17 of AHEP4.

LO1: C4, C15, C17

LO2: C14

LO3: C15

LO4: C15

Module aims

This module incorporates two management themes: 'management theory' and 'quality'. The management theory theme aims to address contemporary management concepts stemming from changing organisational structures, complex environmental conditions, new technological developments and increasingly diverse workforces. It highlights critical management issues involved in both managing and being managed including: components of organisations, environment, strategy, structure, culture, tasks, people and outputs and managerial decisions.

The quality concepts theme aims to provide a context for the management issues in the engineering/industrial sector by parameters that are used to indicate performance. The two topics combine to provide the learner with an introductory knowledge base for how organisations can plan, organise, lead and control work functions.

Learners will be introduced to contemporary management theories, including organizational structures, environmental dynamics, and workforce diversity. Additionally, they can understand quality concepts applicable to the engineering/industrial sector, enhancing their ability to plan, organize, lead, and control functions effectively.

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.

- Planning: Introduction & Research Skills, , Managerial Planning & Strategy
- Organising: Managerial Decision Making, Designing Adaptive Organisations, Managing Innovation and Change, Organising for Quality
- Leading: Leading Strategies Motivating Employees , Contemporary Issues & Team Management
- Controlling: Quality Management Systems, Balanced Scorecard, Decision Making, Improving Operations
- Costing: Total Job Costing, Marginal Costing and Contribution, Variable/Fixed Costs, Budgets and Standard Costing

Learning outcomes

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

- Apply the key functions of management, i.e. planning, organising, leading and controlling in an industrial context. [AHEP: 4-C4, C15, C17]
- Discuss quality improvement methods in application to a relevant industrial application. [AHEP: C14]
- Demonstrate comprehension of the theories of management with particular emphasis on contemporary management concepts and practices. [AHEP: 4-C15]
- Calculate costing parameters used in engineering projects. [AHEP: 4-C15]

Indicative reading list

- Hill, A. and Hill, T. (2012) Operations Management [online] New York, New York: Palgrave Macmillan
- Rüttimann, Bruno G. (2018) Lean compendium : introduction to modern manufacturing theory , Cham : Springer (online resource). available from: http://encore.lib.warwick.ac.uk/iii/encore/record/C__Rb3178185
- Slack, N; Brandon-Jones, A & Johnston, R. (2016) "Operations Management", 8th ed; Pearson Education, UK
- Daft, R.L. (2020) Management 2nd ed. Cengage Publishing

Subject specific skills

- Collate and use a range of data sources and supporting documentation to support projects (S3 in all DA Standards)
- Manage assigned projects or programmes of work to meet the required specification, taking into account factors such as resource requirements, safety, quality, cost and performance or sustainability criteria (S6 in all DA Standards).
- Create and manage a project or work programme plan and develop activities in a logical process embedding mechanisms for adapting to changing circumstances or requirements (S9 in ST0023 and ST0027; S10 in ST0024 and ST0025)
- Identify areas for improvement and lead continuous improvement activities in the operation and performance of the product, system or component (S12 in ST0023; S14 in other DA Standards).

Transferable skills

1. Apply problem solving skills, information retrieval, and the effective use of general IT facilities
2. Exercise initiative and personal responsibility, including time management, which may be as a team member or leader
3. Awareness of the nature of business and enterprise in the creation of economic and social value
4. Overcome difficulties by employing skills, knowledge and understanding in a flexible manner
5. Appreciation of the global dimensions of engineering, commerce and communication
6. Be professional in their outlook, be capable of team working, be effective communicators, and be able to exercise responsibility and sound management approaches.
7. Recognise patterns, themes and key messages from sometimes confused and incomplete data.
8. Make informed decisions on the value of a range of sources allowing an evidence based conclusion based on this analysis.
9. Knowledge and understanding of the need for a high level of professional and ethical conduct in engineering and the use of technical literature, other information sources including appropriate codes of practice and industry standards
10. Knowledge and understanding of risk issues, including health & safety, environmental and commercial risk, risk assessment and risk management techniques and an ability to evaluate

commercial risk

11. Ability to conceive, make and realise a component, product, system or process

Study

Study time

Type	Required
Lectures	10 sessions of 1 hour (7%)
Seminars	5 sessions of 1 hour (3%)
Work-based learning	(0%)
Online learning (scheduled sessions)	15 sessions of 1 hour (10%)
Online learning (independent)	5 sessions of 1 hour (3%)
Other activity	5 hours (3%)
Private study	50 hours (33%)
Assessment	60 hours (40%)
Total	150 hours

Private study description

Guided independent learning.

Online forum and discussion (asynchronous).

Other activity description

Support: 5 hours online support/ consultancy before the assessments.

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group D

	Weighting	Study time	Eligible for self-certification
Assignment	60%	36 hours	Yes (extension)

	Weighting	Study time	Eligible for self-certification
Assignment to apply principles of management and quality to a work based case study.			
Computer based test	40%	24 hours	No
Computer based test			

Feedback on assessment

Formative:

- verbal feedback given in seminar/tutorial sessions;
- automated feedback on Moodle quizzes;
- cohort-level feedback on mock on-line test.

Summative:

- Written Report, individual feedback on Assignment 1
- Exam: invigilated computer-based in-class test, cohort-level feedback.

[Past exam papers for WM192](#)

Availability

Courses

This module is Core for:

- Year 1 of UWMS-H7C3 Undergraduate Applied Professional Engineering (Control/Technical Support Engineer)
- Year 1 of DWMS-H7C7 Undergraduate Applied Professional Engineering (Control/Technical Support Engineer) (Degree Apprenticeship)
- Year 1 of UWMS-H7C2 Undergraduate Applied Professional Engineering (Electrical/Electronic Support Engineer)
- Year 1 of DWMS-H7C6 Undergraduate Applied Professional Engineering (Electrical/Electronic Support Engineer) (Degree Apprenticeship)
- Year 1 of UWMS-H7C1 Undergraduate Applied Professional Engineering (Manufacturing Engineer)
- Year 1 of DWMS-H7C5 Undergraduate Applied Professional Engineering (Manufacturing Engineer) (Degree Apprenticeship)
- Year 1 of UWMS-H7C4 Undergraduate Applied Professional Engineering (Product Design and Development Engineer)
- Year 1 of DWMS-H7C8 Undergraduate Applied Professional Engineering (Product Design and Development Engineer) (Degree Apprenticeship)