ES91P-10 Knowledge-Based Asset Management

21/22

Department
> WMG

Level
> Taught Postgraduate Level

Module leader
> Paul Roberts

Credit value
> 10

Module duration
> 2 weeks

Assessment
> Multiple

Study location
> University of Warwick main campus, Coventry

Description

Introductory description

Excellent organizations plan and manage their knowledge and assets to support policy and strategy and effectively operate their processes, balancing current and future needs of the organization, the community and the environment. Students will learn how effective organizations manage their physical and knowledge resources by working in teams on a business simulation that was introduced in a previous module. They will draw upon the learning from previous core modules thereby heightening their understanding of the interdependencies that are well managed in excellent organizations.

[Module web page](#)

Module aims

To enable participants to develop their ability to apply asset and knowledge management theory and good practices. the intention is that students learn by doing; learning unconsciously by working with colleagues in teams, learning through reviewing what worked and what did not work, developing their skills through practice in a safe learning environment. In the course of their individual study they will create a proposal that applies theory and good practices in an aspect of

asset management, supported by appropriate knowledge management practices.

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.

Concepts of resource and asset management.
Overview of knowledge management in engineering asset management context.
Engineering asset management methodologies.
Maintenance strategies.
Life cycle costing.

Learning outcomes

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

- Identify and analyse opportunities to improve the management of an organization's resources in support of an organization's policy and strategy.
- Create an implementation plan that would deliver the identified opportunities.

Indicative reading list

Dhillon, B. S. (1989). Life cycle costing: techniques, models. and applications. New York: Gordon and Breach Science
EFQM. (2005). The EFQM framework for knowledge management: assessing the organization's knowledge management capabilities. Bruxelles: EFQM
Hauschild, M. Z., Rosenbaum, R. K., & Olsen, S. I. (Eds). (2018). Life Cycle Assessment : Theory and Practice. Cham: Springer
Lacy, P., Long, J., & Spindler, W. (2020). The circular economy handbook : realizing the circular advantage. London: Palgrave.
Lewis, H, & Gertsakis, J. (2001). Design [plus] environment: a global guide to designing greener goods. Sheffield: Greenleaf
North, K., & Kumta, G. (2018). Knowledge management : value creation through organizational learning . Cham: Springer.
Wireman, T. (2004). Benchmarking best practices in maintenance management. New York: Industrial

Subject specific skills

Understand the concepts of engineering asset management and its benefits, Understand the concepts of
knowledge management and its impact on asset management, Understand the methods to identify and
analyse opportunities to improve asset management, Understand the benefits of waste minimisation and
recycling to asset management, Understand the benefits of supply chain and logistic optimisation to asset

management

Transferable skills

Communication, critical thinking, working with others, problem solving, information literacy, numeracy, digital literacy, ethical values, intercultural awareness, professionalism, organizational awareness

Study

Study time

Type	Required
Lectures	2 sessions of 1 hour 30 minutes (3%)
Tutorials	8 sessions of 1 hour 30 minutes (12%)
Online learning (scheduled sessions)	10 sessions of 1 hour 30 minutes (15%)
Online learning (independent)	12 sessions of 1 hour 30 minutes (18%)
Other activity	9 hours (9%)
Assessment	43 hours (43%)
Total	100 hours

Private study description

No private study requirements defined for this module.

Other activity description

6 x 1.5 hrs Group exercises

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group A2

	Weighting	Study time
Assessed work as specified by department	100%	43 hours

	Weighting	**Study time**
Post-Module Assessment		

Assessment group R

	Weighting	**Study time**
Assessed work as specified by department 100% Assignment	100%	

Feedback on assessment

Written, annotated scripts and face-to-face if requested,

Availability

Courses

This module is Core option list B for:

- Year 1 of TESS-H10Z Postgraduate Taught Management for Business Excellence

This module is Option list A for:

- Year 1 of TESS-H1PU Postgraduate Taught International Technology Management