

Module Information

2022.01, Approved

Summary Information

Module Code	6506CVQR
Formal Module Title	Water supply and Wastewater Management
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Oryx Universal College WLL

Learning Methods

Learning Method Type	Hours
Lecture	44
Tutorial	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-PAR	PAR	September	12 Weeks

Aims and Outcomes

Aims	To develop and understanding of current practice and design in the treatment of water and wastewater and design of water supply.To develop an understanding of the characteristics of wastewaters, and associated sludges, and the selection, process design and operation of treatment works to meet discharge standards.To contextualise water and wastewater treatment within the overall management of public water supply and sanitation.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Critically appraise engineering and scientific principles to evaluate proposals and designs for water treatment, wastewater treatment and sludge treatment (utilisation and disposal).
MLO2	2	Appreciate and appraise the current problems in water supply and wastewater treatment management and suggest improvements.
MLO3	3	Assess the sustainability and design water treatment facilities either using standard (biological) or more advanced treatments technologies.

Module Content

Outline Syllabus	Organisational Framework: Global overview; SDG's impact water; Drinking water quality and water treatment standards.Water Supply: Water resource management due to climate change and in water scarce countries, Physico-chemical and biological properties of drinking water and treatment required; Water supply network analysis, design and optimization, the Cross Method. Water Supply Treatment Processes and plant management: Legislation and regulations on water treatment processes; Selection, Design and operation of Water treatment plants. Operational and maintenance tasks, hygiene and protection. Water sampling and examination: physical, chemical and biological. Wastewater Treatment: European and national policy on wastewater treatment; types of trade effluent; Sewer network: flow and design; design and operation of wastewater treatment plants and Physico-chemical and biological treatment processes (primary, secondary and tertiary).Design of sedimentation tanks, phytoremediation; sludge management and the design and operation of treatment and disposal systems.
Module Overview	
Additional Information	The module provides a thorough grounding in the design and operation of water and wastewater treatment plants and water supply networks. It ensures the awareness, competencies and methodology for consideration of specific issues in water and wastewater management.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Examination	70	2	MLO1, MLO2
Report	Design and evaluation task	30	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Khalid Hashim	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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