

Liverpool John Moores University

Title: RIVER MONITORING AND MANAGEMENT
Status: Definitive
Code: **6308NATSCI** (121183)
Version Start Date: 01-08-2021

Owning School/Faculty: Biological and Environmental Sciences
Teaching School/Faculty: Biological and Environmental Sciences

Team	Leader
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Academic Level: FHEQ6
Credit Value: 20
Total Delivered Hours: 40
Total Learning Hours: 200
Private Study: 160

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	18
Off Site	10
Practical	2
Seminar	3
Workshop	7

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Presentation	Presentati	Executive Briefing Note	40	
Report	Report	Consultancy Report	60	

Aims

To introduce and analyse the main water-related legislative and management frameworks that environmental regulators and consultants work within.

To study the application of scientific principles to the management of contemporary river management issues.

To evaluate the methodologies used to investigate, monitor, manage and improve river environments.

To develop the practical skills and knowledge required by professional environmental regulators and consultants working in river management.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically discuss the main legislative and management frameworks governing the management of river pollution.
- 2 Critically evaluate the main issues and challenges involved in river pollution management.
- 3 Develop and apply practical skills to the investigation and analysis of different river pollution issues.
- 4 Report to a professional standard on a specific topic which addresses a major issue in river pollution management.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Consultancy Presentation	1	2	3
Consultancy Report	2	3	4

Outline Syllabus

UK and European Union Water Legislation; Ecosystem Approach; River Catchment Management; Sources, Pathways and Receptors of River Pollution; Principles of River Water Sampling and Analysis; Agricultural and River Pollution; Mining and River Pollution; River Pollution Remediation Practices

Learning Activities

Teaching on this module is in the form of lectures, practicals and field work. Important environmental legislation and river pollution issues and management approaches are explored through lectures and workshops. Field visits to two project sites allow appropriate field investigations of river management issues. Students work in teams to conduct a range of tasks (field work and data gathering, data analysis and report writing). Learning and assessments are focussed on the development of consultancy-style reporting and presentation skills. Assignment 1: Students are required to work together in teams to deliver a professional, consultancy-style presentation to their clients on the issue of diffuse agricultural pollution in river catchments. Assignment 2: Students are required to prepare a professional, consultancy-style environmental report on the issue of mine waste

pollution in river catchments.

Notes

The module is intended to provide students with practical skills and knowledge required by employers such as environmental regulators and consultants working in the area of river management. Teaching on this module is set in the context of the European Union Water Framework Directive (WFD), River Catchment Management and the Ecosystem Approach to environmental management. The WFD requires all EU Member States including the UK to protect and improve the ecological and chemical status of water bodies including rivers. To achieve this, EU Member States are required to develop River Basin Management Plans that outline strategies to monitor, manage and improve the quality status of rivers at the river catchment level. The river catchment is used as the management framework as all human and natural processes operating in a river catchment (air, land and water) have the capacity to influence the chemical and ecological status of water bodies within that catchment. Important river pollution issues that will be covered in this module include diffuse agricultural pollution and mine pollution.