

## MODULE DESCRIPTION FORM



### DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING CL935 Hydrogeology

<b>Module Registrar: Gareth Johnson</b>	<b>Taught To (Course): MSc</b>		
<b>Other Lecturers Involved:</b>	<b>Credit Weighting: 10</b>	<b>Semester: 1</b>	
<b>Assumed Prerequisites:</b>	<b>Compulsory for MSc Hydrogeology; can be optional for other PGT</b>	<b>Academic Level: 5</b>	<b>Suitable for Exchange: Y</b>

#### Module Format and Delivery (HOURS i.e. 1 credit = 10hrs of study):

Lecture	Tutorial	Laboratory	Groupwork	External	Online	Project	Assignments	Private Study	Total
11	22						20	47	100

#### Educational Aim

This module aims to guide the student

- To gain an understanding of Hydrogeology as a discipline,
- To discuss and explore the physical mechanisms of water movement in the subsurface,
- Undertake practical written exercises to demonstrate key principals of groundwater science.
- To explore hydrogeological issues based on case studies.

#### Learning Outcomes

On completion of the module the student is expected to be able to

LO1 The student will be able to understand the movement of groundwater in the subsurface and how to conceptualise groundwater movement as a resource in the subsurface

LO2 The student will be able to understand the role of hydrogeology within water resources management and the importance of hydrogeology as a discipline

LO3 The student will have the ability to interpret hydrogeological parameters and evaluate groundwater resources.

#### Syllabus

The module will include the following:

Introduction to Hydrogeology and the Hydrological Cycle  
Hydrogeological Terms and Darcy's Law  
Elements of Groundwater Flow and Contaminant Transport  
Case Studies of Applied Hydrogeology  
Groundwater Development Essentials

## Assessment of Learning Outcomes

### Criteria

For each of the Module Learning Outcomes the following criteria will be used to make judgements on student learning:

Assessment of learning outcomes will be in the form of assignments (LO1, LO2 & LO3), review quizzes and a final exam that will challenge the learning throughout the semester (LO1, LO2 & LO3).

The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

### Principles of Assessment and Feedback

(within Assessment and Feedback Policy at: <https://www.strath.ac.uk/staff/policies/academic/>)

Tutorial classes will be undertaken in preparation for each of the two assignments. Assignments will be marked within 3 weeks of submission of all reports. Each assignment is worth 20% of the final grade.

Weekly quizzes will be multiple choice on MyPlace and are worth 10% of the final grade.

The final exam (50% weighting) will assess the range of knowledge the student has incorporated during the semester.

### Assessment Method(s) Including Percentage Breakdown and Duration of Exams

L/Outcomes	Examinations				Courseworks		Projects	
	Number	Month(s)	Duration	Weighting	Number	Weighting	Number	Weighting
	1	Dec	2.5 hrs	50	2	40		
	LO1 LO2 LO3			LO1 LO2 LO3				

Indicate which learning outcomes (L01, L02 etc) are to be assessed by exam/coursework/project as required.

### Coursework / Submissions deadlines (academic weeks):

Assignment 1 – Week 6

Assignment 2 – Week 9

### Resit Assessment Procedures:

2.5 hr examination in August diet

### PLEASE NOTE:

Students must gain a summative mark of 50% to pass the module. Students who fail the module at the first attempt will be re-examined during the August diet. This re-examination will consist entirely of exam. No marks from any previous attempts will be transferred to a new resit attempt.

### Recommended Reading

All Notes and links to information required for the module are provided on MyPlace

### Additional Student Feedback

(Please specify details of when additional feedback will be provided)

Date	Time	Room No

Session:

### Approved:

Course Director Signature: Gareth Johnson

Date of Last Modifications: 24/08/22

## MODULE TIMETABLE

Module Code:

CL935

Module Title:

Hydrogeology

### Brief Description of Assessment:

10 weekly class quizzes (10%)  
 2 class assignments: PSD (20%) and BFI (20%)  
 1 exam (50%)

### Assessment Timing:-

Indicate on the table below the start/submission dates for each assignment/project and the timing of each exam/assessment using the dropdowns provided. Dropdowns can be left blank. Add extra notes below the dropdowns.

**Please note: Timings can and will change, this should only be used as a guide.**

Semester One	W&D Wk	WK1	WK2	WK3	WK4	WK5	WK6	WK7	WK8	WK9	WK10	WK11	Exam Period
	Choose an item. Choose an item.	Class Test Choose an item.	Class Test Choose an item.	Class Test  Course work Set Assign 1	Class Test Choose an item.	Class Test Choose an item.	Class Test  Course work Submit Assign 1  Course work Set Assign 2	Class Test Choose an item.	Class Test Choose an item.	Class Test  Course work Submit Assign 2	Class Test Choose an item.	Choose an item. Choose an item.	Exam