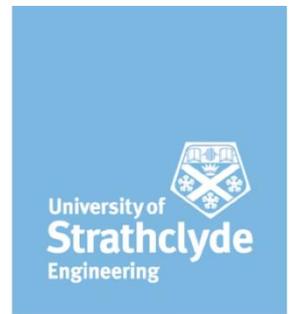


## MODULE DESCRIPTION FORM



### DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

## CL952 Aquifer Mechanics

<b>Module Registrar: Neil Burnside</b>	<b>Taught To (Course): MSc Hydrogeology</b>		
<b>Other Lecturers Involved:</b>	<b>Credit Weighting: 10</b>	<b>Semester: 2 (on campus / DL) &amp; 3 (DL only)</b>	
<b>Assumed Prerequisites: CL935 Hydrogeology</b>	<b>Compulsory for MSc Hydrogeology; can be optional for other PGT</b>	<b>Academic Level: 5</b>	<b>Suitable for Exchange: N</b>

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

Lecture	Tutorial	Laboratory	Groupwork	External	Online	Project	Assignments	Private Study	Total
18	6						40	36	100

#### Educational Aim

This module aims to provide the student with an understanding of:

- Hydrogeology and Subsurface Fluid Flow
- Well Hydraulics and Pumping Tests
- Real-world applications of Hydrogeology

#### Learning Outcomes

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

LO1: The student will be able to synthesize key features about aquifer dynamics in order to create a comprehensive conceptual understanding

LO2: The student will be able to evaluate and determine groundwater aquifer properties through numerical analysis of well hydraulic data

LO3: The student will be able to identify practical challenges facing groundwater resource use and understand approaches on how to manage these

#### Syllabus

The module will teach the following:

Lectures will provide information on groundwater resources, aquifer properties, and well hydraulics

Tutorials will be used to underpin practical understanding of aquifer properties

## 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 a well data analysis report (LO2 & LO3), a semester report that will demonstrate one's conceptual understanding of aquifer properties (LO1 & LO3), and a summative exam and continually assessed review quizzes 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/> )

Reports will receive informative evaluation and feedback within three weeks of submission, so = students work can be informed of their understanding and progress.

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

L/Outcomes	Examinations				Courseworks		Class quizzes	
	Number	Month(s)	Duration	<i>Weighting</i>	Number	<i>Weighting</i>	Number	<i>Weighting</i>
	1	May / Aug	2 hrs	40	2	50	10	10
	See Assessment of Learning Outcomes							

*Indicate which learning outcomes (LO1, LO2 etc.) are to be assessed by exam/coursework/project as required.*

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

Conceptual report – Week 7  
Field Data analysis report – Week 9

### Resit Assessment Procedures:

Take-home examination in August diet / Resubmission of coursework(s) before commencement of the August exam 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 / coursework.

### Recommended Reading

All textbooks and materials required for the module are available on MyPlace

**Additional Student Feedback**

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

Date	Time	Room No

Session:

**Approved:**

**Course Director Signature: Neil Burnside**

**Date of Last Modifications: 22/10/21**



## Appendix

### Mapping Module Learning Outcomes to AHEP

Assessment Title	Engineering Council AHEP competencies
LO1	Science and mathematics + Engineering analysis + Engineering practice
LO2	Science and mathematics + Engineering analysis + Engineering practice
LO3	Science and mathematics + Engineering analysis + Engineering practice

### Programme Threads

Thread	Assessment Title		
	Primary	Secondary	Contributory
Design			
Health, Safety & Risk Assessment			x
Sustainability		x	
Professionalism, Ethics, Diversity and Inclusion			
Application of Maths to solve engineering problems			
Industrial Engagement & Site Visits			
Digital Technologies			