CI9-FM-06 Experiments & Paper Review

<table>
<thead>
<tr>
<th>Course leader:</th>
<th>Prof Graham Hughes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other contributors:</td>
<td>TBC</td>
</tr>
<tr>
<td>Module status:</td>
<td>Core</td>
</tr>
<tr>
<td>Pre- or co-requisites:</td>
<td>CI9-FM-01, CI9-FM-03 to CI9-FM-05</td>
</tr>
<tr>
<td>Term:</td>
<td>Autumn</td>
</tr>
<tr>
<td>Contact hours:</td>
<td>25</td>
</tr>
<tr>
<td>ECTS units:</td>
<td>5</td>
</tr>
<tr>
<td>FHEQ Level:</td>
<td>7</td>
</tr>
<tr>
<td>Assessment:</td>
<td>Coursework</td>
</tr>
</tbody>
</table>

1.0 Aims

The aims of this module are to:

- provide hands-on experience of designing and performing experimental investigations for a wide range of fluid flows
- instruct how to critically review existing literature within fluid mechanics

2.0 Syllabus

This module will cover the following topics:

- Demonstration and investigation of canonical flows in the Hydrodynamics Laboratory such as:
  - Plumes and jets
  - Gravity currents
  - Convection
  - Deep- and shallow-water waves
  - Regular, focused and random waves
  - Sediment dynamics and transport
- Data collection and analysis.
- Study and report on key associated papers.

3.0 Intended learning outcomes

On successfully completing this module, students will be able to:

- Describe flows in coastal, offshore and environmental engineering in terms of fundamental fluid mechanical phenomena.
- Critically appraise and analyse experimental measurements.
- Design appropriate measurement and processing techniques.
4.0 Teaching methods

The module will be taught using a series of experiments and tutorials.

5.0 Assessment

Assessment information will be provided separately.

6.0 Recommended textbooks

Category as defined by Central Library: C = Core, S = Supplementary