<table>
<thead>
<tr>
<th><strong>Full Title</strong></th>
<th>Professional Civil Engineering Practice</th>
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</thead>
<tbody>
<tr>
<td><strong>Status</strong></td>
<td>Draft</td>
</tr>
<tr>
<td><strong>Start Term</strong></td>
<td>2020</td>
</tr>
<tr>
<td><strong>NFQ Level</strong></td>
<td>08</td>
</tr>
<tr>
<td><strong>ECTS Credits</strong></td>
<td>40</td>
</tr>
<tr>
<td><strong>Module Code</strong></td>
<td>CIVE08076</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>52 Weeks - (52 Weeks)</td>
</tr>
<tr>
<td><strong>Department</strong></td>
<td>Building &amp; Civil Engineering</td>
</tr>
<tr>
<td><strong>Module Author</strong></td>
<td>Shane Newell</td>
</tr>
<tr>
<td><strong>Co Authors</strong></td>
<td>John Hanahoe</td>
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**Module Description**

This module will be undertaken by the student whilst in the workplace and will allow the student to demonstrate that they have achieved the Engineers Ireland programme outcomes of accredited Level 8 programmes for the purpose of applying for the professional title of Chartered Engineer following completion of an accredited Masters and initial professional development (IPD).

**Learning Outcomes**

On completion of this module the learner will/should be able to:

1. Apply knowledge and understanding of engineering principles.
2. Identify, formulate, analyse and solve engineering problems.
3. Design a system, component or process to meet specified needs.
4. Conduct guided research and critically evaluate engineering problems.
5. Recognise and explain the social and ethical responsibilities of engineering towards people and the environment.
6. Demonstrate ability to work effectively as an individual, in teams and in multi-disciplinary settings.
7. Communicate effectively with respect to engineering activities.

**Indicative Syllabus**

The syllabus is based on the Engineers Ireland (EI) programme outcomes (a-g) for Level 8 engineering programmes which meet the educational standard for Chartered Engineer.

El PO (a): Knowledge and understanding of the mathematics, sciences, engineering sciences and technologies underpinning their branch of engineering

El PO (b): The ability to identify, formulate, analyse and solve engineering problems.

El PO (c): The ability to design a system, component or process to meet specified needs.

El PO (d): The ability to design and conduct experiments and to conduct guided research, or advanced technical activity.

El PO (e): An understanding of the need for high ethical standards in the practice of engineering, including the responsibilities of the engineering profession towards people and the environment

El PO (f): The ability to work effectively as an individual, in teams and in multidisciplinary settings, together with the capacity to undertake lifelong learning.

El PO (g): The ability to communicate effectively on specialised engineering activities with the engineering community and with society at large.

**Teaching and Learning Strategy**
Year long module (Sept-Sept).

This module will be undertaken by the student whilst in the workplace and will consist of several components which allow the student to demonstrate that they have achieved the EI programme outcomes a-g. At the start of the programme, there will be an induction workshop in September for student and employer mentors to explain the seven EI programme outcomes a-g and explore how the student can achieve the programme outcomes in the respective workplace environment. The employer must ensure that the student has the appropriate workplace structures in place to ensure that they can meet the EI programme outcomes. Following the induction workshop, the employer and student must sign a tri-partite agreement that they understand the aims and objectives of the programme and that they believe they have the necessary resources and supports to achieve the programme outcomes whilst in the workplace. A workplan must be submitted by the employer and student which details how the EI programme outcomes a-g will be attained in the workplace. The workplan must be approved by GMIT.

All students will be assigned an academic mentor from GMIT who will visit the student and employer in both the first semester (Oct-Dec) and second semester (Jan-Mar) to assess how the work-based learning strategy is progressing and identify any revisions to the process which may be required.

The module will consist of the following components:

- Induction Workshop (GMIT)
- Online lectures
- Student Logbook (online)
- Interim Reports (online) indicating progress towards reaching the learning outcomes and any difficulties encountered
- Workplace Visits by GMIT academic mentor (minimum of 2)
- Engineering Practice Report
- Professional Presentation
- Professional Interview

A series of online lectures and resources will be available to the students which gives guidance in relation to the type of work-based tasks which can be used to demonstrate achievement of the EI programme outcome and also in relation to report writing, presentation skills and interview techniques. The online lectures may be accessed ‘live’ or view a recording.

Students must demonstrate that they have achieved the seven EI programme outcomes (a-g) to pass the module.

**Students must pass the Engineering Practice Report element to pass the module.**

### Assessment Strategy

**Interim Reports (Uploaded via Moodle) - 10%**

Students uploaded interim progress report (2No.) which outlines progress towards achieving the EI programme outcomes and any challenges or difficulties which they may encounter. The interim reports will form the basis for discussion during the workplace visits by the academic mentor.

**Engineering Practice Report - 60% - MUST PASS ELEMENT**

Students must explicitly demonstrate attainment of the EI programme outcomes (a-g). The report template will require student to address how each programme outcome was achieved in the workplace.

**Professional Presentation & Interview - 30%**

Student must deliver professional presentation to academic panel demonstrating attainment of the EI programme outcomes (a-g) in the workplace. Student will be interviewed by academic panel following presentation to assess the knowledge and understanding of the student with respect to the EI programme outcomes.

### Repeat Assessment Strategies

Students who do not submit the Engineering Practice Report in September may submit in December or following September.

Students who do not pass the Engineering Practice Report element in September may re-submit following detailed feedback in December or following September.

### Indicative Coursework and Continuous Assessment:

<table>
<thead>
<tr>
<th>Form</th>
<th>Title</th>
<th>Percent</th>
<th>Week (Indicative)</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written Report</td>
<td>Interim Reports</td>
<td>10 %</td>
<td>OnGoing</td>
<td>1,2,3,4,5,6,7</td>
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<tr>
<td>Written Report</td>
<td>Engineering Practice Report</td>
<td>60 %</td>
<td>End of Term</td>
<td>1,2,3,4,5,6,7</td>
</tr>
<tr>
<td>Interview</td>
<td>Professional Presentation &amp; Interview</td>
<td>30 %</td>
<td>End of Term</td>
<td>1,2,3,4,5,6,7</td>
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### Blended Delivery Mode Average Weekly Workload:

1.19 Hours
<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Location</th>
<th>Hours</th>
<th>Frequency</th>
<th>Weekly Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial</td>
<td>Workshop</td>
<td>Flat Classroom</td>
<td>2</td>
<td>Once Per Module</td>
<td>0.04</td>
</tr>
<tr>
<td>Supervision</td>
<td>Workplace Visit</td>
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<td>2</td>
<td>Once Per Semester</td>
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<tr>
<td>Supervision</td>
<td>Supervision (0.5hr per week)</td>
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<td>Weekly</td>
<td>0.50</td>
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<tr>
<td>Online Learning</td>
<td>Online resources related to programme outcomes</td>
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<td>Fortnightly</td>
<td>0.50</td>
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<tr>
<td>Independent Learning</td>
<td>Work-based learning and research</td>
<td>Not Specified</td>
<td>8</td>
<td>Weekly</td>
<td>8.00</td>
</tr>
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**Required Reading Book List**


**Online Resources**

Online resources will be provided to students on Moodle.  
https://library.gmit.ie/support/academic-writing-centre/

**Other Resources**

GMIT HD in Civil Engineering Manual

**Programme Membership**