Aims and outcomes: The major objective of the unit is to acquire basic theory and principals of Hydraulics and to develop students’ ability to apply the knowledge of hydraulics to solve a wide range of engineering problems. Students are expected to develop a good degree of skills in problem identification, formulation and solution and be able to solve practical engineering problems using the skills established through this unit.

Unit description: This is a single semester unit. It covers fundamental knowledge about hydraulics and applications of hydraulics to engineering problems. Unit content includes pipe flow and pipeline network analysis, pumps and pumping systems; pressure surge in pipelines; open channel flows; hydraulic structures; hydrodynamic forces on offshore structures and introduction to wave mechanics and wave predictions.

Timetabling: Hydraulics II is a single-semester subject. The course comprises 39 lectures and 24 tutorials/assignments. The venues and time of lectures and tutorials are as advised at: http://www.civil.uwa.edu.au/teaching/CIVL3130

Lecturer: Dr. Tongming Zhou,
Office: Room 192b, Civil Engineering Building,
Phone: 6488 7094
Email: tzhou@civil.uwa.edu.au
Consultation hours: Wednesday 2pm - 4pm

Textbooks: This unit does not have an assigned text book. However relevant references will be advised for different sections during lectures.

Teaching hours:

<table>
<thead>
<tr>
<th>No</th>
<th>Contents</th>
<th>Teaching hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pipe flow and pipeline network analysis</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Pump and pipeline system</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Unsteady flow &amp; water hammer in pipeline</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Open channel flows</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Hydraulic structures and flow measurement</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>Introduction to wave mechanics</td>
<td>6</td>
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<tr>
<td>7</td>
<td>Hydrodynamic forces on offshore structures</td>
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Assessment: Students will be assessed on the following two components:

1. Assignments (30%)
2. Examination(s) (70%) (Closed book)

The final mark of the unit is calculated as:

Final mark = assignment mark (total 100) × 30% + examination marks (total 100) × 70%

The minimum pass mark for the unit is the total mark of 50.

3. Methods of examinations: to be discussed during the first lecture

Three in-class exams without final exam

1) Test 1: March 26, Friday. Covers contents in Weeks 1-3
2) Test 2: April 30, Friday. Covers contents in Weeks 4-7
3) Test 3: May 28, Friday. Covers contents in Weeks 8-13

It should be noted that the unit marks may be scaled in line with the Faculty’s Policy on Assessment Practices and Procedures (http://www.ecm.uwa.edu.au/for/students/assessment). No supplementary examinations will be available for the unit.

Assignment: You will have one assignment fortnightly (with totally 6 assignments). Question sheets will normally be distributed every week. Assignments are required to be handed in before 5:00pm of Friday of the following week. Late submissions subject to a 20% penalty per day and no assignments will be accepted if the due date is exceeded for more than 5 days. Special considerations, however, will be granted only where the circumstances are verified by a medical certificate or other appropriate documentation.

Lecture notes: The lecture notes are available at the unit web site:

http://www.civil.uwa.edu.au/teaching/CIVL3130

Plagiarism: Plagiarism is taking someone else’s thought, writing or invention and claiming it as your own. Plagiarism is regarded by the University as serious misconduct (see http://www.ecm.uwa.edu.au/for/students/plagiarism). If plagiarism of ideas, information, text or other printed material is detected in work submitted for assessment, that work will be assigned a mark of zero. The Head of School will be informed and a note kept on file.

Appeals and Student Rights: The Faculty Policy for Appeals can be found at http://www.ecm.uwa.edu.au/for/students/exams and the Charter of Student Rights can be found at http://www.secretariat.uwa.edu.au/home/policies/charter.