in pipe networks.	

The students will be able to perform basic calculations 4.

## **ASSESSMENT**

The assessment tasks for this course have been developed to achieve the following outcomes:

- x Assess each student's achievements in terms of each of the four learning outcomes listed above;
- x Provide an incentive for students to keep up with the work presented in this course;
- x Provide indications to students of how well they are achieving the learning outcomes prior to the final exam;
- x Provide an opportunity for experimental results observation and interpretation;
- x Manage the possible occurrence of unauthorized student collaboration on individual assessment tasks

<u>Hydraulics Online Quizzes</u> on the Moodle course page. Two online quizzes (each 5% marks) will take place in Weeks 3 & 5 on the Moodle course page. For the respective week, the Quizzes will be available for 24 hours between 6 pm Thursday and 6 pm Friday. A time limit of 4 hours has been set for the Quiz from the time you start your attempt. You are allowed 1 attempt with a 4-hour time limit for this attempt within the given time frame (i.e. if you start your attempt at 4.30 pm on Friday, your attempt will automatically end at 6 pm with the end of the Quiz time frame). You can review and change your answers before submitting your attempt. Each Quiz will comprise 5 randomly allocated numerical questions testing your understanding of the course theory. You will need a calculator. Your answers to the Quiz questions will be assessed automatically against the correct answer within Moodle. Feedback will be provided at the end of the Quiz, after 6 pm on Friday of the respective week, via Moodle. Yes

<u>Hydraulics laboratory online assessment</u> on the Moodle course page is an individual assessment of the hydraulics course content. You are required to complete a laboratory lesson. For those enrolled into the face-to-face session, you will be given a demonstration in the Kensington Hydraulics Laboratory. For those unable to attend the face-to-

## **PENALTIES**

**Penalties for late submission:** late work will be penalised at the rate of 10% per day after the due time and date have expired. Work submitted late during or after a weekend will count as 2 days.

## SPECIAL CONSIDERATION

Students who miss assessment tasks (including the quizzes and lab class) will be required to formally apply for special consideration (with appropriate documentation) before alternative arrangements will be considered. Details for UNSW special consideration applications are available at: <a href="https://student.unsw.edu.au/special-consideration">https://student.unsw.edu.au/special-consideration</a>

1-Page research assignment	1 page	15% of final marks	1,2	Students are expected to demonstrate an ability to undertake independent research to explore new (to them) information about a topic related to water and wastewater treatment.	Submit on Moodle by 6pm Friday 30 July.	1 week after due date.	Marks returned Monday 9 August.
Final exam	2 hours	60% of final marks	1,2, 3,4	Students are expected to demonstrate their ability to describe the important characteristics of commonly applied water and wastewater treatment processes. Furthermore, students will demonstrate ability to perform basic calculations around water quality and water treatment process design characteristics. Students are expected to demonstrate their understanding of open channel flow hydraulics and pump and turbines in pipe networks by performing calculations and explaining basic concepts.	During UNSW Term 2 examinations period.	N/A.	During formal

## RELEVANT RESOURCES

- x All required lecture material will be provided on Moodle.
- x The following text is strongly recommended for the Water & Wastewater Treatment components: <u>Environmental Engineering: Principles and Practice</u>. Richard O. Mines, Jr. ISBN: 978-1-118-80145-1. Wiley-