

Course Outline Semester 2 2018

# **MECH4620**

# **COMPUTATIONAL FLUID DYNAMICS**

## 1. Staff contact d

#### Contact details and consultation times for course convenor

Name: Dr Victoria Timchenko Office Location: Room 401C, J17 Tel: (02) 9385 4148 Fax: (02) 9663 1222 Email: <u>v.timchenko@unsw.edu.au</u> Moodle: <u>https://moodle.telt.unsw.edu.au/login/index.php</u> Consultation times: Thursday 2-3pm Communication preference: Email

#### Contact details and consultation times for additional lecturers/demonstrators/lab staff

Name: Dr Anthony Yuen Office Location: Room 401, J17 Tel: (02) 9385

- Place CFD in the context of a useful design tool for industry and a vital research tool for thermos-fluid research across many disciplines;
- Familiarize students with the basic steps and terminology associated with CFD. This includes

## 5. <u>Course schedule</u>

| Week | Lecturer | Торіс | Work during laboratory session | Assignment Activity |
|------|----------|-------|--------------------------------|---------------------|
| 1    | VT       |       |                                |                     |

### 6. Assessment

#### Assessment overview

You will be assessed by way of 2 sets of tutorial-style

#### Assignments

#### Tutorial-style problems

The short assignments containing 2 sets of tutorial-style problems (T1 and T2) are listed in the Course Schedule. They will involve theoretical work and calculations. Assignments will be available on the Moodle website.

#### Group project

The group project involves a complete CFD analysis, from the initial concept through to CAD, meshing, pre-

the examinations. The list of approved calculators is shown at <u>student.unsw.edu.au/exam-approved-calculators-and-computers</u>

It is your responsibility to ensure that your calculator is of an approved make and model, and

Centre prior to allowed into the examination room.

#### Special consideration and supplementary assessment

The discussion forum is intended for you to use with other enrolled students. The course convenor and/or demonstrators will occasionally look at the forum, monitor any inappropriate content, and take note of any frequently-asked questions, but will only respond to questions on the forum at their discretion. If you want help from the convenor, then direct contact is preferred.

## 8. Course evaluation and development

Feedback on the course is gathered periodically using various means, including the UNSW myExperience process, informal

Student/Staff meetings. Your feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an

## Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

|                         | Program Intended Learning Outcomes  |
|-------------------------|---|
|                         | PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals                          |
| edge<br>ase             | PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing                 |
| owle<br>ill B           | PE1.3 In-depth understanding of specialist bodies of knowledge  |
| : Kn<br>d Sk            | PE1.4 Discernment of knowledge development and research directions                                    |
| PE1<br>and              | PE1.5 Knowledge of engineering design practice  |
|                         | PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice |
| ing<br>ility            | PE2.1 Application of established engineering methods to complex problem solving                       |
| neer<br>Ab ר            | PE2.2 Fluent application of engineering techniques, tools and resources                               |
| PE2: Engi<br>Applicatio |   |

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