

School of Civil and Environmental Engineering

Term 2, 2020

ENGG1300

ENGINEERING MECHANICS I

COURSE DETAILS

| | |
|------------------------|-------------------------------------|
| Units of Credit | 6 |
| Contact hours | 6 hours per week |
| Class | Monday 3:00pm . 5:00pm Wednesday |

TEACHING STRATEGIES

This course is designed for student-centred learning. Students are encouraged to think critically to solve engineering problems and to ask questions. Students should participate both with the online content and in-class in order to best achieve the learning outcomes

The following teaching strategies are implemented in this course:

Lectures

Focus on the development and application of generalised problem-solving processes for engineering mechanics. Lectures will also emphasise the relationship of the content to engineering practice and will provide an opportunity for reflection on learning. The lectures are recorded and should be available on the Moodle course page.

Pre-recorded Problem Solving Classes

Concentrate on developing strategies for solving problems in engineering mechanics. You are expected to watch the pre-recorded problem solving classes and attempt the problems prior to attending workshops.

Workshops

Help you to further develop and consolidate problem solving skills. You will be encouraged, from time to time, to work in small groups to solve problems. The class problem sessions (workshops) **are compulsory** and begin in **Week 1** of term. We encourage you to develop a close working relationship with your demonstrators and the rest of your class.

Moodle Course Page

Provides a step-by-step guide to complete the course. There is a discussion forum to help provide interaction and help from your peers. Links to video recordings and Online Learning Modules to help you learn the solution techniques for many of the subject areas.

Recorded Lectures

Will be uploaded to Moodle to help students to revise. Please note that the recorded lectures are **NOT** substitutes for attending lectures or reading the lecture notes. The quality of the recorded lectures can be poor and are not professional produced. The pace of the recorded lectures can seem very slow because the lecturer is expecting students to take notes in the class and is adjusting their pace accordingly.

Self-centred and self-directed learning (expectations of the students):

In addition to the class problem sessions, you are expected to commit **6 - 8 hours per week** (1.5 hours for each hour of contact) to independent learning and general problem solving.

Suggested approaches to learning in this course include:

Regular participation in lectures and workshop class problem sessions. *Review lecture and class problem material. Follow worked examples. Reflect on class problems and quizzes.*

Complete all the required tasks in the Moodle course page for this course.

Weekly reading and recording of your learning.

Appropriate preparation for class problem activities.

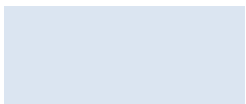
Planning your time to achieve all assessment requirements (see assessment).

We encourage you to work with your peers. A good way to learn the material is in small study groups. Such groups work best if members have attempted the problems individually before meeting attacking an exercise and go to your classmate with a relevant question. Your classmate then has the opportunity to learn from your question as well as help you. You then bring something to the collaboration.

Students who perform poorly in the quizzes are strongly encouraged to discuss their progress with the lecturers during the term. Please do not suffer in silence . seek the help at an early stage! We would like you to make most of this learning process and receive a high grade in the course.

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| EXPECTED LEARNING OUTCOMES |
|-----------------------------------|

ASSESSMENT OVERVIEW



RELEVANT RESOURCES

Textbooks:

R.C. Hibbeler, *Engineering Mechanics: Statics*. 14th Edition in SI Units

R.C. Hibbeler, *Engineering Mechanics: Dynamics*. 14th Edition in SI Units

or

Bedford and Fowler, *Engineering Mechanics: Statics*. 5th Edition, Prentice Hall, 2008.

Ó'Connell and Fowler, *Engineering Mechanics: Dynamics*. 5th Edition, Prentice Hall, 2008.

Additional relevant materials may include:

Pearson MyLab and Mastering Engineering.

Additional materials will be provided on Moodle

Pearson Mastering Engineering:

<http://www.pearsonmylabandmastering.com/northamerica/masteringengineering/>

Moodle site may be accessed through: <http://moodle.telt.unsw.edu.au>

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DATES TO NOTE

Refer to MyUNSW for Important Dates available at: <https://student.unsw.edu.au/dates>

PLAGIARISM

Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

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