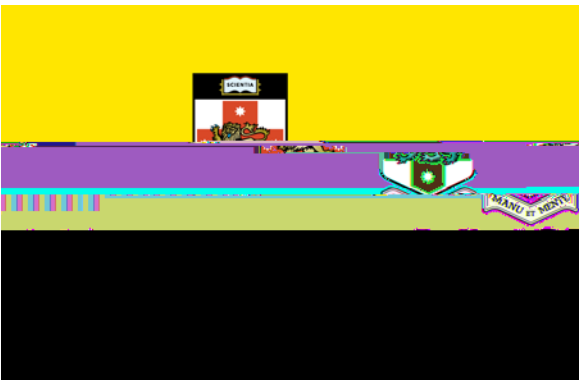

Mechanical and Manufacturing Engineering

Course Outline

Semester 2 2018

MMAN2600

FLUID MECHANICS

Contents

1. Staff contact details

Contact Details and Consultation Times for Course Convenor

Name: Dr Shaun Chan
Office location: Room 402D, Building J17
Email: qing.chan@unsw.edu.au
Research: https://research.unsw.edu.au/projects/advanced-combustion-diagnostics-laboratory

For questions regarding demonstration/example problems, the demonstrators in your demonstration will be the first contact. Administrative enquiries that are personal and confidential in respect of an individual student can be made to the course convenor (Dr Shaun Chan), if the circumstances require it.

Head Demonstrator (contact for online assignment and laboratory etc.)
Name: Mr Samuel Olgers (Online assignment)
Email: s.olgers@unsw.edu.au

Name: Mr Harsh Goyal (Lab)
Email: harsh.goyal@unsw.edu.au

Contact Details and Consultation Times for Additional Lecturers/Demonstrators/Lab staff

Please see the course Moodle.

2. Important links

- Moodle
- UNSW Mechanical and Manufacturing Engineering
- Course Outlines
- Student intranet
- UNSW Mechanical and Manufacturing Engineering Facebook
- UNSW Handbook

3. Course details

Credit Points

This is a 6 unit-of-credit (UoC) course, and involves ~5 hours per week (h/w) of face-to-face contact.

The UNSW website states “The normal workload expectations of a student are approximately 25 hours per semester for each UoC, including class contact hours, other learning activities, preparation and time spent on all assessable work. Thus, for a full-time

5. Course schedule

LABORATORY TIMETABLE

Undergraduate Teaching Laboratory (UTL), J18 Willis Annexe

Laboratory Time Slots

W13A	Wed	1300 – 1500	UTL
W15A	Wed	1500 – 1700	UTL
H09A	Thu	0900 – 1100	UTL
H11A	Thu	1100 – 1300	UTL
F11A	Fri	1100 – 1300	UTL
F13A	Fri	1300 – 1500	UTL
F15A	Fri	1500 – 1700	UTL

Due to the large number of students, each of these timeslots will further be broken into two groups. You will be notified of which group, Archimedes or Bernoulli, you are in before the lab commences in week 3. For example, if you are enrolled to W13A and are selected for group Bernoulli, you will attend the lab on Wed 13:00-15:00 in week 4, 6, 8, and 12. If you are enrolled to H11A and are selected for group Archimedes, your lab will be on Thurs 11:00-13:00 in week 3, 5, 7, and 11.

	Week of Semester										
Group	3	4	5	6	7	8	9	10	11	12	13
Archimedes	Lab 1		Lab 2		Lab 3		**No lab**	**No lab**	Lab 4		
Bernoulli		Lab 1		Lab 2		Lab 3	**No lab**	**No lab**		Lab 4	

Laboratory Topic

Lab 1 Flow measurement
Lab 2 Hydrostatics
Lab 3 Pipe friction
Lab 4 Pelton wheel

***There will be no waiver of labs for repeating students.**

6. Assessment

Assessment overview

Assessment	Length	Weight	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
6 x Online assignments	2 hours per assignment	15%	1, 2, 3, 4	Lecture material from weeks 1-2, 3-4, 5-6, 7-8, 9-10 and 11-12	23.59 on Saturdays at the end of weeks 3, 5, 7, 9, 11 and 13.	N/A	Online
4 x Laboratories	2 hours per lab session	15%	1, 2, 3, 4	Lab materials	During each allocated lab class	N/A	In lab
2 x Mid-session tests	1 hour per test	20%	1, 2, 3, 4	Lecture material from weeks 1-4 and 5-9	Week 5 and 10	N/A	In class, during Week 7 and 12 lectures
1 x Final exam	2 hours	50%	1, 2, 3, 4	All course content from weeks 1-12 inclusive	TBC, during UNSW exam period	N/A	Upon release of final results

Assignments

Online Assignments

You will have six online assignments. Each assignment will cover the topics that were taught in the prior weeks, with work due at 23.59 on Saturdays at the end of weeks 3, 5, 7, 9, 11 and 13. The online assignments are an integral part of this course. In recognition of this, they will contribute 15% of your final grade. Each online assignment mark has a total mark out of 3. The best five of the six online assignments will then be summed to give the online assignment component of your final grade.

Note:

- Your work on these must be your own work, but you are encouraged to discuss the methods required with other students.
- Each version of an online assignment will be slightly different.
- The online assignments are available from the beginning of the semester so that you have an extended period to complete them.
- No deadline extensions will be granted. You should attempt these assignments with sufficient remaining time to allow for unplanned service interruptions.

Lab Assignments

There will be four laboratory experiments held as outlined in the “Laboratory Timetable”.

You are required to obtain a bound laboratory book (alternate lined and graph pages) to record results of each experiment and analysis carried out whilst in the laboratory.

The laboratory demonstrators will mark your preliminary work at the start of the laboratory period and mark your data collection and analysis at the end of the laboratory period. Ensure that your work is marked before you leave the laboratory, that your mark is entered in the class record and that your laboratory book is initialled by the demonstrator.

You will not be admitted to the laboratory unless you are appropriately dressed for safe working, have a laboratory book, a calculator and present the assigned preliminary work.

The laboratory demonstrators will give instructions on how to operate the equipment and will explain what is required of you. If in doubt, ask. It is important that you fully understand the experiment at the time it is being carried out, when instruction is available. In some experiments, you are only required to take readings at intervals, use the intermediate time to ask questions and find out what other members of your group are doing. Little is learned merely by sitting and waiting to make a measurement - much is learned by inquiry and discussion.

Attendance at all laboratory experiments to which you are assigned is compulsory and a register is taken. If you are unable to attend due to illness, it is important that you inform the Head Demonstrator as soon as possible so that you may be reassigned to that experiment at a later date. You might be asked to present a medical certificate later.

Transfer from other groups. The laboratory groups are large, so transfers between groups are granted only for the circumstances that are unexpected and beyond your control. The transfers must be arranged through the Head Demonstrator. Please note that according to the university's rule for special consideration, "Students are expected to give priority to their University study commitments and work commitments are not normally considered a justification."

Lab report marks will be allocated for completion of preliminary analysis, results obtained and calculations made during the laboratory period (2 marks for preliminary work, 2 marks for measurements, data analysis and conclusions). You do not have to submit a formal report; results of any calculations must be shown to the laboratory demonstrators for checking during the laboratory period.

Preparation prior to the laboratory periods is essential. Study the laboratory notes so that you know what the experiment is about in advance of each laboratory session. If you arrive without the necessary preparation, you may not be allocated the laboratory mark. Bring a calculator to all laboratory periods. **Submission of preliminary work which is not your own, or copying during the laboratory period, will result in a mark of 0 for the laboratory.**

Presentation

All non-electronic submissions should have a standard School cover sheet which is available from this course's Moodle page.

All submissions are expected to be neat and clearly set out. Your results are the pinnacle of all your hard work and should be treated with due respect. Presenting results clearly gives the marker the best chance of understanding your method; even if the numerical results are incorrect.

Submission

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of 20 per cent (20%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day.

Work submitted after the 'deadline for absolute fail' is not accepted and a mark of zero will be awarded for that assessment item.

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b. Online quizzes where answers are released to students on completion, or
c. Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date, or
d. Pass/Fail assessment tasks.

Marking

Marking guidelines for assignment submissions will be provided at the same time as assignment details to assist with meeting assessable requirements. Submissions will be marked according to the marking guidelines provided.

Examination

There will be one two-hour examination at the end of the session for everything learned from this course.

You must be available for all tests and examinations. Final examinations for each course are held during the University examination periods, which are June for Semester 1 and November for Semester 2.

Provisional Examination timetables are generally published on myUNSW in May for Semester 1 and September for Semester 2.

For further information on exams, please see the Exams section on the intranet.

Mid-session Tests

There will be two one-hour mid-session tests (held in weeks 5 and 10). For each test, there will be questions from week 1~4 lectures (Test 1) and week 5~9 lectures (Test 2

7.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis) even suspension from the university. The Student Misconduct Procedures are available here: www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Further information on School policy and procedures in the event of plagiarism is available on the intranet.

10. Administrative matters and links

All students are expected to read and be familiar with School guidelines and polices, available on the intranet. In particular, students should be familiar with the following:

- Attendance, Participation and Class Etiquette
- UNSW Email Address
- Computing Facilities
- Assessment Matters (including guidelines for assignments, exams and special consideration)
- Exams
- Approved Calculators
- Academic Honesty and Plagiarism
- Student Equity and Disabilities Unit
- Health and Safety
- Student Support Services

Appendix A: Engineers Australia (EA)