



Source Outline  
Semester 2 2018

**AERO3630**  
**AERODYNAMICS**



# 1. Staff contact d

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

Name: Professor Con Doolan  
Office location: Ainsworth 408  
Tel: (02) 9385 5696  
Email: [c.doolan@unsw.edu.au](mailto:c.doolan@unsw.edu.au)

Please contact Professor Doolan by email to arrange an appointment outside of scheduled teaching and consultation times.

## Contact hours

	<b>Day</b>	<b>Time</b>	<b>Location</b>
<b>Lectures</b>	Tuesday	4pm - 6pm	Ainsworth 202
	Thursday	9am - 10am	Ainsworth 202
(Web)	Any	Any	Moodle
<b>Demonstrations</b>	Thursday	10am - 11am	Ainsworth 202



## 5. ~~Course schedule~~

WK	Topics	Assessment/Experiment
1	Introduction to course; Fundamentals, governing equations, fluid motion	
2	Potential Flow	Assignment 1 Due
3	Incompressible flow over airfoils	-
4	Incompressible flow over wings	Assignment 2 Due
5	Compressible flow, Shock and Expansion Waves, Experimental/Wind Tunnel Testing	-
6	Nozzle Flows, Linearised compressible flow	Assignment 3 Due
7	Hypersonic aerodynamics  Labs	<hr/> 1. Flow Visualisation 2. Pressure distribution over cylinder
8	Special topics  Labs	<hr/> 3. Pressure Distribution over a 2D wing 4. Drag of an airfoil 5. Compressible Nozzle flow
9	Special topics	Low-Speed Aero Project Due
10	Fundamental equations of viscous flow, Laminar and turbulent boundary layers	Assignment 5 Due
11	Flow separation, compressible boundary layers, turbulent flow	-
12	Review/Catchup	Assignment 6 Due
13	Review/Catchup (if needed)	Lab Reports Due



## **Assignments**

### *Presentation*

Most if not all submissions will be electronic via Moodle.

All non-electronic submissions should have a standard School cover sheet which is available from this [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.





content on-line, freeing up more face-to-face time for explanations, examples, group discussion and projects

I will provide detailed derivations and equation lists on-



# Appendix A: Engineers Australia (EA) Competencies

## Stage 1 Competencies for Professional Engineers

	<b>Program Intended Learning Outcomes</b>
--	---

PE1.1 Comprehensive, theory

PE1: Knowledge  
and Skill Base