Mechanical and Manufacturing Engineering

Course Outline

ENGG3002

Automotive Engineering

[redacted]

1. Staff contact

Contact details and consultation times for course convenor

Name: Daniel Eggler
Office location: 402H
Email: d.eggler@unsw.edu.au
Consultation time: Thursday 2-3pm

Generally, problem-solving session time should be used for direct consultation. If you require further consultation beyond problem-solving sessions, then you may contact me via email to set up a consultation appointment.

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

Please see the course Moodle.

2. Important links

Moodle
Lab Access
Computing Facilities
Student Resources
Course Outlines
Engineering Student Support Services Centre
Makerspace
UNSW Timetable
UNSW Handbook
UNSW Mechanical and Manufacturing Engineering

3. Course details

Credit points

This is a 6 unit-of-credit (UoC) course and involves 12 hours per

Contact hours

	Day	Time	Location
Lectures	Monday	10am – 12noon	Ainsworth G01
	Tuesday	10am – 12noon	Ainsworth G01
	Wednesday	10am – 12noon	Ainsworth G01
	Thursday	10am – 12noon	Ainsworth 201
Problem-Solving Class	Monday		

Learning Outcome	EA Stage 1 Competencies
3. Define the key components used in vehicle design and how these affect automotive performance outcomes.	1.1,

A case study will be used to help students enhance their understanding of the fundamental course concepts. A field trip will be organised to provide a hands-on experience to enrich the learning experience. Upon completion of the field trip, students will complete a technical report. The students will be provided with guided questions and feedback to support their technical writing.

5. Course schedule

Week	Topic	Location	Day and Time
1a	Introduction to automotive engineering	AW G01	Mon 10am-12noon
1b	Engine Technology	AW G01	Tue 10am-12noon
1c	Transmissions and Drivelines	AW G01	Wed 10am-12noon
1d	Transmissions and Drivelines	AW 201	Thur 10am-12noon
2a	Vehicle handling	AW G01	Mon 10am-12noon
2b	Industry Guest Speaker	AW G01	Tue 10am-12noon
2c	Tyres	AW G01	Wed 10am-12noon
2d	Brakes	AW 201	Thur 10am-12noon
3a	Ride and Vibration	AW G01	Mon 10am-12noon
3b	Suspension	AW G01	Tue 10am-12noon
3c	Vehicle Aerodynamics	AW G01	Wed 10am-12noon
3d	Revision	AW 201	Thur 10am-12noon

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
	PE1.3 In-depth understanding of specialist bodies of knowledge