FACULTY OF ENGINEERING
AUSTRALIA’S NO. 1 ENGINEERING SCHOOL

Times Higher Education (2018)
"[In engineering] you go through a process of identifying the problem, analysing it, developing a solution, testing it and iterating between testing and designing and eventually developing a packaged outcome. That applies to business, to strategy, it applies to anything."

— Alan Finkel,
AO FAA FTSE, Australia’s Chief Scientist
BACHELOR OF ENGINEERING (HONS)

- Common First Year
- Double Degrees
- More than just a degree
- Complete your degree in just 4 years
- Continuous Professional Development (CPD)
- Facilities
- Scholarships
- Accredited degrees (Engineers Australia)
10 ENGINEERING SPECIALISATIONS

- Aerospace Engineering
- Chemical Engineering
- Civil Engineering
- Electrical and Computer Systems Engineering
- Environmental Engineering
- Materials Engineering
- Mechanical Engineering
- Mechatronics Engineering
- Resources Engineering
- Software Engineering
**What do I need to get in?**

**BACHELOR OF ENGINEERING (HONS)**

**Prerequisites and minimum study scores**

Indicative ATAR 91.5

<table>
<thead>
<tr>
<th>Subject</th>
<th>Minimum Study Score</th>
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<tbody>
<tr>
<td>English (EAL)</td>
<td>30</td>
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<tr>
<td>OR any other English</td>
<td>25</td>
</tr>
<tr>
<td>Maths Methods (any)</td>
<td>25</td>
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<tr>
<td>OR Specialist Maths</td>
<td>25</td>
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<tr>
<td>OR Chemistry</td>
<td>25</td>
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<td>OR Physics</td>
<td>25</td>
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BACHELOR OF ENGINEERING (HONS) / MASTER OF ADVANCED ENGINEERING ACCELERATED PATHWAY

Vertical double

Accelerated program for high-achieving students

Earn both a Bachelor of Engineering (Hons) + an expert master’s degree in Advanced Engineering in just 5 years

Indicative ATAR 95

Undergraduate Weighted Average of 70%

Scholarships up to $32,000.
WOMEN IN ENGINEERING
Chief Operating Officer, Monash Motor Sport

Bachelor of Mechanical Engineering (Hons) and Bachelor of Laws (LLB)

Internship, 3 months at AVL Schrick GmbH Germany

Simone Briggs
Monash Motorsport
MONASH MOTORSPORT TEAM

A Student-run team who design, build, test and race their very own Formula SAE cars in Australia, and around the world. #Europe 2018
NOVA ROVER TEAM

Jiachun Huang
Chassis Team, Nova Rover
PhD, Mechanical Engineering

Lauren Hanson
Chassis Team, Nova Rover
Bachelor of Mechanical Engineering (Hons) and Bachelor of Science
NOVA ROVER SELECTED TO COMPETE IN MARS ROBOT CHALLENGE

First team from Australia ever to be accepted into the competition in its 12-year history, and the only team from the Southern Hemisphere competing this year.
Graduated from Monash University (Bachelor of Mechanical Engineering) in 1998

Megan is Senvion Australia’s Manager - Communications and External Affairs.

Previous Head of Policy for the UK Business Council for Sustainable Energy

Member of FLAMES (Female Leaders Alumni Monash Engineering)

Member of Monash Engineering Foundation Board since 2013

Megan Wheatley
Alumna
EVENTS

FIND OUT MORE...
Vehicle Aerodynamics: Where are the drag savings on modern vehicles?

TERENCE AVADIAR
My journey so far...

- Finished high school (2009)
  - Heavily involved with Monash Motorsport
- Worked part-time in 2014 and first half of 2015
- Decided to return for postgrad research (2015 – current)
Research background

- Approximately 1 billion passenger vehicles worldwide actively used worldwide
- Aerodynamic drag is 60% of vehicle total drag
- Increased popularity of vehicles geometries with bluff body rears such as Estates, SUVs and crossovers
How do we find out the answers?

- Wind tunnel experiments
- Water channels
- Numerical or computer simulations
- How do studies on simplified models transfer to realistic geometries?
How do we find out the answers?

- 1.4 MW wind tunnel
- Up to 200 kph
A new model

- Simplified vs realistic
What are we looking to improve on?

- Vortex structures in the wake
- Pressure on the back of the vehicle
- What happens in the wake over time or how does geometry changes affect the time-varying drag causing flow structures?
What about the front of the car?

- Complex, even has flow on effects on the wake at the back of the car
Other fields where aero matters
Thank you
Trina Majumdar
BBiomedSci/BE (Hons)
PhD Candidate,
Materials Science and Engineering Monash University
What is Materials Science and Engineering?
MY JOURNEY
The Past:
BBiomedSci/B Eng (Hons)

anatomy, biochemistry, biotech, physiology, biomaterials, mechanics, materials durability, polymers, ceramics, management, pharmacology, functional materials, microbiology, neurobiology, microstructural development...
What Next?
The Present : My PhD Project

Strategies in improving the osseointegration of titanium based orthopaedic implants
The Future...

Industry?  Medical Devices?
Teaching?  Clinical Work?
Post-doc Research?
"Every decently-made object, from a house to a lamp post to a bridge, spoon or egg cup, is not just a piece of 'stuff' but a physical embodiment of human energy, testimony to the magical ability of our species to take raw materials and turn them into things of use, value and beauty…"

- Kevin McCloud

Thanks for your time!

Email me if you have any more questions at;

Trina.Majumdar@monash.edu