Meet your course coordinator
Master of Engineering (Biomedical)
Master of Engineering (Biomedical with Business)

Dr David Ackland
Department of Biomedical Engineering
dackland@unimelb.edu.au
Biomedical engineers have enormous potential to enhance human health.
Patient-specific prosthetic jaw-joint design, testing, 3D-printing, sterilisation, implantation
Course structure

- Biomedical: 200 points core + 100 points elective = 300 points
- With Business: 250 points core + 50 elective = 300 points
- Up to 100 points of credit
<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Semester 1</td>
<td>Engineering Mathematics</td>
<td>Chemistry 1</td>
<td>Creating Innovative Engineering</td>
<td>Bioengineering elective</td>
</tr>
<tr>
<td>Year 1</td>
<td>Semester 1</td>
<td>Biomechanical Physics and Computation</td>
<td>Circuits and Systems</td>
<td>Introduction to Biomechanics</td>
<td>Biology of Cells and Organisms</td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester 2</td>
<td>Biotransport Processes</td>
<td>Biosystems Design</td>
<td>Anatomy and Physiology for</td>
<td>Bioengineering elective</td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester 1</td>
<td>Clinical Trials and Regulations</td>
<td>Bioinstrumentation</td>
<td>Biomedical Engineering</td>
<td>Bioengineering elective</td>
</tr>
<tr>
<td>Year 5</td>
<td>Semester 2</td>
<td>Capstone</td>
<td>Design</td>
<td>Approved elective</td>
<td>Approved elective</td>
</tr>
<tr>
<td>Year 5</td>
<td>Semester 1</td>
<td>Bioengineering elective</td>
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The Master of Engineering (with Business) recognises the need for engineers to understand the management of organisations.
Master of Engineering (Biomedical with Business)

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<th>Semester 1</th>
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<td>Anatomy and Physiology for Engineers</td>
<td>Marketing Management for Engineers</td>
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<td>Bioengineering elective</td>
<td>The World of Engineering Management</td>
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<td>Capstone</td>
<td>Design</td>
<td>Economic Analysis for Engineers</td>
<td>Biomaterials</td>
</tr>
<tr>
<td>Year 5</td>
<td>Semester 1</td>
<td>Bioengineering elective</td>
<td>Strategy Execution for Engineers</td>
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NOTE: With Business students do not take CIE
Electives

Tissue Engineering and Stem cells
Computational Biomechanics
Computational Genomics
Medical Imaging
Neural Information Processing
and more....

http://www.eng.unimelb.edu.au/study/degrees/master-engineering-biomedical/overview
Biomedical Engineering Pathway

Maths and science
- Engineering Mathematics
- Biology of Cells and Organisms
- Chemistry 1

Design, research, management
- Clinical Trials and Regulations
- Clinical Engineering
- Biomedical Engineering Management
- BioDesign Innovation
- Design Project

Biomechanics
- Biomechanical Physics and
- Introduction to Biomechanics
- Biomaterials
- Anatomy and Physiology for Engineers
- Soft tissue and cellular biomechanics
- Computational Biomechanics

Biocellular
- Biotransport Processes
- Soft Matter Engineering
- Tissue Engineering and Stem Systems Biology

Biosignals and genomics
- Circuits and Systems
- Biosystems Design
- Medical Imaging
- Neural Information Processing
- Computational Genomics
- Algorithms for Functional Genomics
Enrolment

- Advanced standing
- Changing subjects
- Timetabling clashes
- CREM (Class Registration Enquiry Management)
Study differences

- Unscheduled class time
- Self-directed learning
- Active discussion
- Argumentative writing style
- Grading style
Learning styles

- Lectures
- Tutorials
- Seminars
- Laboratories/practical classes
- Workshops
- Studios
- Online learning
Examinations

- Remain in Melbourne for the entire study period
- Final results release date: Friday 1\textsuperscript{st} December 2017
Academic misconduct

- Plagiarism
- Collusion
- Working in groups

https://academichonesty.unimelb.edu.au/?_ga=1.180392610.445416620.1452827974
Academic Integrity

The University of Melbourne expects the highest ethical standards from its students and staff in all areas of their academic work and professional behaviour. The work of each individual reflects on the academic and professional standing of the University as an institution that upholds ethical practice in research, learning, and teaching. Academic work submitted for assessment or publication must be the original work of the author or authors. If the ideas or words of others have been drawn upon, this must be thoroughly and clearly acknowledged using agreed scholarly conventions (Prof Richard James).
Academic Integrity in 2016 for MSE

• 140 allegations of academic misconduct
• 50 resulted in educative exercises
• 2 found not guilty
• 54 given substantial penalties (zero for subject or zero for the assignment)
• 34 received reprimands
Library research skills

- Self-paced
- Basic and advanced materials
- Relate skills to your research area
- Access via LMS

www.lms.unimelb.edu.au/login/
Most common forms of academic misconduct

1. Copying and pasting from web sites or other published material, even if referenced (but not quoted)
2. Same as 1) but then substituting some synonyms in the belief that it is paraphrasing
3. Copying images and tables without acknowledgment
4. Copying words, analysis, structure or style from other students (often from previous years)
5. Using computer code from others without acknowledgment
6. “Signing in” for other students where attendance is mandatory
7. Not turning off mobile phones in exams
Easiest ways to avoid academic misconduct

1. Compose the argument yourself, rather than modifying someone else’s.
2. Develop and set out analysis yourself.
3. Learn the **fine detail** of how to properly reference the work of others.
4. Learn how to read a ‘Turn It In’ report so you can check a team mates work.
5. Use a reference manager (EndNote or Mendeley)
6. Decide whether you want to learn and maintain your self respect and values
STOP connecting students and services

INFORMATION FOR STUDENTS
Your student services
online, on the phone and in person

Find all of your Uni info online
students.unimelb
Comprehensive website for current students at Melbourne

Check our FAQs or ask online
ask.unimelb
University’s knowledge database
Join a chat

Call us
Monday to Friday
13 MELB (13 6352)
Outside Australia: +61 3 9035 5511

Visit us Monday to Friday
Stop 1 at PARKVILLE
All students
757 Swanston Street
(Main entrance off Grattan Street)

Stop 1 at SOUTHBANK
VCA and MCM students only
234 St Kilda Road, Southbank
(Elisabeth Murdoch Building)

Health and Wellbeing services
All students
138 Cardigan Street, Carlton

Current opening hours: students.unimelb.edu.au/stop1
Helpful online pages:
students.unimelb.edu.au/balance
services.unimelb.edu.au/finder
Offers a range of services to help you succeed

ADMISSIONS INFORMATION
- Our courses
- Entry requirements
- Single subject studies
- Extension program

SKILLS AND DEVELOPMENT SERVICES
- Careers
- Academic skills
- Student connect
- Study abroad and exchange

ADMINISTRATIVE AND INFORMATION SERVICES
- Fees
- Transcripts and academic statements
- Scholarships and graduations

SUPPORT SERVICES
- Disability
- Elite athletes and international student support

ENROLMENT SERVICES
- Course planning
- Enrolment assistance
- Special consideration
- Student equity

Ask online or check our FAQs
ask.unimelb.edu.au

Call us 13 MELB (13 6352)

PARKVILLE/SOUTHBANK
- 757 Swanston Street
- 234 St. Kilda Road (VCA and MCM students only)
If you need ongoing assistance due to long-term circumstances, you can register with Student Equity and Disability Support.

We offer a range of support services:

- Alternative formats for written materials
- Support workers, such as note-takers
- Specialist equipment
- Assistive technology
- Accessible teaching spaces

Visit services.unimelb.edu.au/disability/students
Course Planning and Enrolment help

You can get course advice at any time from a Student Advisor at Stop 1. They can assist you to make informed decisions about:

- Subject selection
- Majors, minors and specialisations
- Study pathways
- Study Abroad and Exchange

Read our course planning page to get you started.

Access course planning resources: students.unimelb.edu.au/admin/course-planning/resources
FOLLOW US FOR THE LATEST UPDATES:

@uomstop1

FIND US ON FACEBOOK:

uomstop1

firstyearatunimelb
# Special Consideration

## Ongoing or episodic circumstances

As a student, you may have ongoing or episodic circumstances that adversely affect your academic performance. These could include:

<table>
<thead>
<tr>
<th>Example circumstances</th>
<th>Example study adjustments</th>
</tr>
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<tbody>
<tr>
<td>Chronic illness</td>
<td>Leave of absence</td>
</tr>
<tr>
<td>Disability</td>
<td>Reduced study load</td>
</tr>
<tr>
<td>Students with carer status</td>
<td>Alternative exam arrangements</td>
</tr>
<tr>
<td>Elite athletes or performers</td>
<td>Support, such as note-takers</td>
</tr>
<tr>
<td>Army Reservists</td>
<td>Specialist equipment/technology</td>
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</tbody>
</table>

If you have ongoing circumstances that may affect your studies, find out how to register for assistance at [students.unimelb.edu.au/admin/special](http://students.unimelb.edu.au/admin/special).
Welcome Celebration, Old Engineering, 4:15pm today