

# 4639 Bachelor of Aerospace Engineering (Honours) 2015

## Aerospace Engineering

### Stage One:

(48 credit points)

- Course advice is required for enrolment in stage one – enrolment plan depends on the need for foundation units
- Level 2 electives may be undertaken following successful completion of 24 credit points
- Students undertake a common first year and nominate their chosen specialisation through the 'branch selection' process

Core Units (30 credit points) – all students complete:	Foundation units (0, 6 or 12 credit points)
ENG1060 Computing for engineers ENG1091 Mathematics for engineering ENG1001 Engineering design: lighter, faster, stronger ENG1002 Engineering design: cleaner, safer, smarter ENG1003 Engineering mobile apps MAE2405 Aircraft performance	<i>Students who have not completed VCE units 3&amp;4 of Chemistry, Physics and/or Specialist Mathematics must complete one or two units from:</i> ENG1070 Foundation Chemistry ENG1090 Foundation Mathematics PHS1080 Foundation physics
Elective units (6, 12 or 18 credit points)	
CHM1011 Chemistry I (Clayton) <u>or</u> CHM1051 Chemistry 1 advanced (Malaysia) ENE1621 Environmental engineering ENG1021 Spatial communication in engineering ENG1051 Materials for energy and sustainability ENG1071 Chemistry for engineering ENG1081 Physics for engineering ESC1011 Planet earth: our place in the universe** MNE1010 Introduction to mining	CHE2161 Mechanics of fluids <u>or</u> MEC2404 Mechanics of fluids ECE2041 Telecommunications ECE2072 Digital systems MAE2405 Aircraft performance TRC2001 Introduction to systems engineering Free elective – can be taken from any faculty where prerequisites can be met **Recommended elective

### Stage Two

(48 credit points)

<b>Sem 1</b>	ENG2091 Advanced engineering mathematics A <b>Prerequisites</b> <a href="#">ENG1091</a> or <a href="#">(MTH1030 or MTH1035 f</a> or students studying double degrees with science)	MAE2401 Aircraft structures 1	MEC2401 Dynamics 1	MEC2402 Engineering design I <b>Co-requisites</b> <a href="#">MEC2403</a> or <a href="#">MAE2401</a> or <a href="#">I RC2201</a>
<b>Sem 2</b>	ENG2092 Advanced engineering mathematics B <b>Prerequisites</b> <a href="#">ENG1091</a> or <a href="#">(MTH1030 or MTH1035 f</a> or students studying double degrees with science)	MAE2402 Thermodynamics and heat transfer	MAE2403 Aerospace computational mechanics <b>Prerequisites</b> <a href="#">ENG1060</a> , <a href="#">ENG1091</a> or <a href="#">MTH1030</a> or <a href="#">MTH1035</a> <b>Co-requisites</b> <a href="#">ENG2092</a>	MAE2404 Aerodynamics I <b>Prerequisites</b> <a href="#">MAE1041</a> and <a href="#">MAE1042</a> <b>Co-requisites</b> <a href="#">ENG2091</a> , <a href="#">ENG2092</a>

### Stage Three

(48 credit points)

<b>Sem 1</b>	MAE3401 Aerodynamics II <b>Prerequisites</b> <a href="#">ENG2091</a> , <a href="#">ENG2092</a> and <a href="#">MAE2404</a>	MAE3404 Flight vehicle dynamics <b>Prerequisites</b> <a href="#">ENG2091</a> , <a href="#">ENG2092</a> , <a href="#">MEC 2401</a>	MAE3407 Aircraft structures II <b>Prerequisites</b> <a href="#">MEC2402</a> , <a href="#">MAE2401</a> and MAE2400 (or <a href="#">MTE3541</a> )	Engineering elective – choose from elective list below
<b>Sem 2</b>	MAE3402 Aerospace design project <b>Prerequisites</b> <a href="#">MAE1041</a> , <a href="#">MAE3401</a> , <a href="#">MA E3407</a> , <a href="#">MEC2402</a>	MAE3405 Flight vehicle propulsion <b>Prerequisites</b> <a href="#">MAE2402</a> and <a href="#">MAE3401</a>	MAE3406 Aerospace materials <b>Prerequisites</b> MAE2400 or <a href="#">MTE3541</a>	MAE3408 Aerospace control <b>Prerequisites</b> <a href="#">MAE3404</a>

**Stage Four****(48 credit points)**

<b>Sem 1</b>	MEC4401 Final year project  <b>Prerequisites</b> Must have passed 36 credit points at level three in the engineering component of the course.	MAE4404 Aerospace practices  <b>Prerequisites</b> Completion of 132 points	MEC4426 Computer-aided design  <b>Prerequisites</b> Must have passed 96 credit points including <a href="#">MEC3455</a> or <a href="#">MAE2401</a> or <a href="#">TRC2201</a> .	Engineering elective – choose from elective list below
<b>Sem 2</b>	MAE4408 Damage tolerance and airworthiness	Engineering elective – choose from elective list below	Engineering elective – choose from elective list below	Engineering elective – choose from elective list below

<b>Aerospace Engineering elective units:</b>	
MAE4407 Instrumentation and avionics	MEC4402 Final year – thesis
MAE4409 Wing design*	MEC4446 Composite structures
MAE4965 Advanced aerodynamics and turbulence	MEC4447 Computers in fluids and energy
MAE4980 Aircraft engines	MEC4459 Wind engineering
MEC4418 Control systems	* Preferred elective
MEC4428 Advanced dynamics	

**Notes:**

<b>Credit points</b>	Unless specified, all units are worth 6 credit points <b>Bachelor of Aerospace Engineering 32 units x 6cp = Total of 192 credit points</b>
<b>Unit requisites</b>	All pre-requisite and co-requisite requirements must be undertaken in order to be able to enrol into a specific unit
<b>Duration of degree</b>	4 years full-time, 8 years part-time
<b>Time limit</b>	Time limit = 8 years. Students have eight years in which to complete this award from the time they commence first year. Periods of intermission are counted as part of the eight years.
<b>Course advice</b>	<a href="http://www.eng.monash.edu.au/current-students/course-advice.html">www.eng.monash.edu.au/current-students/course-advice.html</a>
<b>Monash University handbook</b>	Students should follow the course structure for the year the course was commenced <a href="http://monash.edu.au/pubs/2015handbooks/courses/4639.html">http://monash.edu.au/pubs/2015handbooks/courses/4639.html</a>

All information correct at publication but may be subject to change – February 2015 v2

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