Aerospace Engineering (Honours) 2015

### 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

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<tr>
<th>Core Units (30 credit points) – all students complete</th>
<th>Foundation units (0, 6 or 12 credit points)</th>
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</table>
| 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 | Students who have not completed VCE units 3&4 of Chemistry, Physics and/or Specialist Mathematics must complete one or two units from:  
ENG1070 Foundation Chemistry  
ENG1090 Foundation Mathematics  
PHS1080 Foundation physics |

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<tr>
<th>Elective units (6, 12 or 18 credit points)</th>
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| CHM1011 Chemistry I (Clayton) or  
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 or  
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)

#### Sem 1
- ENG2091 Advanced engineering mathematics A  
  Prerequisites ENG1091 or (MTH1030 or MTH1035 if or students studying double degrees with science)  
- MAE2401 Aircraft structures I  
- MEC2401 Dynamics 1  
- MEC2402 Engineering design I  
  Co-requisites MEC2403 or MAE2401 or TRC2201

#### Sem 2
- ENG2092 Advanced engineering mathematics B  
  Prerequisites ENG1091 or (MTH1030 or MTH1035 if or students studying double degrees with science)  
- MAE2402 Thermodynamics and heat transfer  
- MAE2403 Aerospace computational mechanics  
  Prerequisites ENG1060, ENG1091 or MTH1030 or MTH1035  
  Co-requisites ENG2092  
- MAE2404 Aerodynamics I  
  Prerequisites MAE1041 and MAE1042  
  Co-requisites ENG2091, ENG2092

### Stage Three: (48 credit points)

#### Sem 1
- MAE3401 Aerodynamics II  
  Prerequisites ENG2091, ENG2092 and MAE2404  
- MAE3404 Flight vehicle dynamics  
  Prerequisites ENG2091, ENG2092, MEC2401  
- MAE3407 Aircraft structures II  
  Prerequisites MEC2402, MAE2401 and MAE2400 (or MTE3541)  
- Engineering elective – choose from elective list below

#### Sem 2
- MAE3402 Aerospace design project  
  Prerequisites MAE1041, MAE3401, MAE3407, MEC2402  
- MAE3405 Flight vehicle propulsion  
  Prerequisites MAE2402 and MAE3401  
- MAE3406 Aerospace materials  
  Prerequisites MAE2400 or MTE3541  
- MAE3408 Aerospace control  
  Prerequisites MAE3404
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<tr>
<th>Sem 1</th>
<th>MEC4401 Final year project</th>
<th>MAE4404 Aerospace practices</th>
<th>MEC4426 Computer-aided design</th>
<th>Engineering elective – choose from elective list below</th>
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<tr>
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<td><strong>Prerequisites</strong></td>
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<td>Must have passed 36 credit points at level three in the engineering component of the course.</td>
<td>Completion of 132 points</td>
<td>Must have passed 96 credit points including MAE3455 or MAE2401 or TRC2201.</td>
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<tr>
<th>Sem 2</th>
<th>MAE4408 Damage tolerance and airworthiness</th>
<th>Engineering elective – choose from elective list below</th>
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### Aerospace Engineering elective units:

- MAE4407 Instrumentation and avionics
- MAE4409 Wing design*
- MAE4965 Advanced aerodynamics and turbulence
- MAE4980 Aircraft engines
- MEC4418 Control systems
- MEC4428 Advanced dynamics
- MAE4402 Final year – thesis
- MEC4446 Composite structures
- MEC4447 Computers in fluids and energy
- MEC4459 Wind engineering
- *Preferred elective

### Notes:

- **Credit points**: Unless specified, all units are worth 6 credit points
- **Bachelor of Aerospace Engineering**: 32 units x 6cp = **Total of 192 credit points**
- **Unit requisites**: All pre-requisite and co-requisite requirements must be undertaken in order to be able to enrol into a specific unit
- **Duration of degree**: 4 years full-time, 8 years part-time
- **Time limit**: 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.
- **Course advice**: [www.eng.monash.edu.au/current-students/course-advice.html](http://www.eng.monash.edu.au/current-students/course-advice.html)
- **Monash University handbook**: Students should follow the course structure for the year the course was commenced [http://monash.edu.au/pubs/2015handbooks/courses/4639.html](http://monash.edu.au/pubs/2015handbooks/courses/4639.html)

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