

Bachelor of Science and Bachelor of Engineering in the field of materials engineering

Student ID		Student name	
Course code	0085	Year commenced course	
Course version	For students who commenced in 2006 onwards		
Credit points	240 points (40 x 6 points)		
Duration of degree	5 years full time, 10 years part time		
Time limit	10 years. Students have ten years in which to complete this award from the time they commence their course. Periods of intermission are counted as part of the ten years.		
Honours	Students are awarded a degree with honours for meritorious performance throughout the course. No additional time is required.		
Notes	In second year, students choose from either a generic or a computer science sequence.		
Course adviser	http://www.eng.monash.edu.au/current-students/course-information.html#1		

Students should bring this course map with them when they seek course advice.

First year - All sequences	Mark	Grade
<input type="checkbox"/> ENG1060 Computing for engineers		
One of (ENG1050 is recommended):		
<input type="checkbox"/> ENG1010 Momentum, heat and mass transfer		
<input type="checkbox"/> ENG1020 Engineering structures		
<input type="checkbox"/> ENG1030 Electrical systems		
<input type="checkbox"/> ENG1040 Engineering dynamics		
<input type="checkbox"/> ENG1050 Engineering materials		
Select a pair of maths units from:		
<input type="checkbox"/> MTH1020 Analysis of change (if VCE 3/4 Specialist Maths not completed)		
MTH1030 Techniques for modelling		
<input type="checkbox"/> MTH1030 Techniques for modelling		
MTH2010 Multivariable calculus		
Select a pair of science units from:		
<input type="checkbox"/> CHM1011 Chemistry		
CHM1022 Chemistry		
<input type="checkbox"/> PHS1011 Physics (or PHS1080 is VCE 3/4 Physics not completed)		
PHS1022 Physics		
Select one additional pair of science units from:		
<input type="checkbox"/> ASP1010 Earth to cosmos – introductory astronomy		
ASP1022 Life and universe		

<input type="checkbox"/> BIO1011 Biology I		
BIO1022 Biology II		
<input type="checkbox"/> CHM1011 Chemistry		
CHM1022 Chemistry (if not already taken)		
<input type="checkbox"/> ESC1011 Planet Earth and its environment: the cosmic connection		
ESC1022 Planet Earth: dynamic systems, environmental change and resources		
<input type="checkbox"/> FIT1002 Computer programming		
FIT1015 Computer science		
<input type="checkbox"/> PHS1011 Physics (or PHS1080 is VCE 3/4 Physics not completed)		
PHS1022 Physics (if not already taken)		
<input type="checkbox"/> STA1010 Statistical methods for science		
MTH1112 Numbers, logic and graphs		
Second year	Mark	Grade
<i>Generic sequence</i>		
<input type="checkbox"/> MTE2541 Nanostructure of materials		
<input type="checkbox"/> MTE2542 Microstructural development		
<input type="checkbox"/> MTE2544 Functional materials		
<input type="checkbox"/> MTE2545 Engineering materials I		
<input type="checkbox"/> MTH2021 Linear algebra with applications		
<input type="checkbox"/> MTH2032 Differential equations with modelling and MTH2010 if that was not taken at level 1		
12 point second level sequence chosen from physics, chemistry, astronomy, computer sciences or life sciences (including physiology):		
<input type="checkbox"/>		
<input type="checkbox"/>		
<i>Major sequence in materials science</i>		
<input type="checkbox"/> MSC2011 Nanostructure of materials		
<input type="checkbox"/> MSC2122 Microstructural development		
<input type="checkbox"/> MTH2021 Linear algebra with applications		
<input type="checkbox"/> MTH2032 Differential equations with modelling		
24 points of science units, including MTH2010 if that was not taken at level 1:		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
Third year	Mark	Grade
<i>Generic sequence</i>		
<input type="checkbox"/> MTE2543 Materials selection and design		
<input type="checkbox"/> MTE2546 Mechanics of materials		
<input type="checkbox"/> MTE3541 Materials durability		

<input type="checkbox"/> MTE3545 Functional materials and devices		
24 points of approved science units to complete a first major sequence in science*:		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
Major sequence in materials science		
24 points from:		
<input type="checkbox"/> MSC2111 Functional materials		
<input type="checkbox"/> MSC3111 Materials durability		
<input type="checkbox"/> MSC3121 Microstructural design in structural materials		
<input type="checkbox"/> MSC3132 Functional materials and devices		
<input type="checkbox"/> MSC3142 Materials characterisation and modelling		
24 points of approved science units to complete a second major sequence in science*:		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
Fourth year	Mark	Grade
Generic sequence		
<input type="checkbox"/> MTE3542 Microstructural design in structural materials		
18 points of level 3 core units from the Bachelor of Engineering in the field of materials engineering:		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
24 points of approved science units to complete a second major sequence in science* or a double major sequence in mathematics of chemistry:		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
Major sequence in materials science		
<input type="checkbox"/> MTE2543 Materials selection and design		
<input type="checkbox"/> MTE2545 Engineering materials I		
<input type="checkbox"/> MTE2546 Mechanics of materials		
<input type="checkbox"/> MTE3543 Microstructure to applications: the mechanics of materials		
<input type="checkbox"/> MTE3544 Management and practice in materials engineering		
<input type="checkbox"/> MTE3546 Engineering materials II		
Choose one unit from:		
<input type="checkbox"/> MTE2544 Functional materials		

<input type="checkbox"/> MTE3541 Materials durability		
<input type="checkbox"/> MTE3542 Microstructural design in structural materials		
<input type="checkbox"/> MTE3545 Functional materials and devices		
<input type="checkbox"/> MTE3547 Materials characterisation and modelling (for which equivalent materials science unit was not taken before)		
6 point elective in materials engineering:		
<input type="checkbox"/>		
Fifth year	Mark	Grade
Generic sequence		
<input type="checkbox"/> MTE4525 Project I		
<input type="checkbox"/> MTE4526 Project II		
<input type="checkbox"/> MTE4571 Materials engineering design and practice		
<input type="checkbox"/> MTE4572 Polymer/composite processing and engineering		
<input type="checkbox"/> MTE4573 Processing and engineering of metals and ceramics		
6 point level 3 materials engineering core unit:		
<input type="checkbox"/>		
12 points of level 4 materials engineering electives:		
<input type="checkbox"/>		
<input type="checkbox"/>		
Major sequence in materials science		
<input type="checkbox"/> MTE4525 Project I		
<input type="checkbox"/> MTE4526 Project II		
<input type="checkbox"/> MTE4571 Materials engineering design and practice		
<input type="checkbox"/> MTE4572 Polymer/composite processing and engineering		
<input type="checkbox"/> MTE4573 Processing and engineering of metals and ceramics		
18 points of electives in materials engineering (students taking the biomaterials sequence can choose relevant electives and a project:		
<input type="checkbox"/>		
<input type="checkbox"/>		
<input type="checkbox"/>		
* Any sequence in science may be taken, provided the appropriate sequence requirements and prerequisites are completed. In some cases, students may elect to seek approval for an overloaded course of up to 12 points at level 2 or 3 to enable these requirements to be completed in addition to the required science units at level 2.		
Professional requirements	Mark	Grade
Students may not graduate until they have completed their work experience and submitted a satisfactory report on the experience		
<input type="checkbox"/> 12 weeks approved engineering work experience		
<input type="checkbox"/> Report submitted to department and approved		