

Science

Bachelor of Materials Science and Engineering (3131) - [Handbook](#)

2023 Commencing Students
Program Structure



Single Degree Mode

PROGRAM STRUCTURE	An approved Major	180 UOC	192 UOC
	Material Science Core		
	General Education	12 UOC (2 courses)	

General Education must be taken from courses that are not considered [Science Electives](#) or courses taught by the Faculty of Engineering.

Material Science students cannot take GENS or GENE courses under any circumstance.

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2023 Commencing Students – Single Degree – Major in Ceramic Engineering ([MATSJ1](#))

Choose from available proposed courses in each year

Year 1		
CHEM1811 (T1)	DESN1000 (T1, T3)	MATS1192 (T1, T3)
PHYS1121 (T1, T2, T3) OR PHYS1131 (T1, T2, T3)	MATH1231 (T1, T2, T3) OR MATH1241 (T1, T2)	6 UOC First Year Engineering Elective (See Note 1)
MATH1131 (T1, T2, T3) OR MATH1141 (T1, T3)	COMP1911 (T1, T2, T3) OR ENGG1811 (T2)	

Year 2		
MATS2001 (T1)	MATS2004 (T2)	MATS2006 (T3)
MATS2003 (T1)	MATS2005 (T2)	MATS2007 (T3)
MATH2019 (T1)	MATS2008 (T2)	

Year 3		
MATS3001 (T1)	MATS3004 (T2)	6 UOC Professional Elective (See Note 2)
MATS3002 (T1)	MATS3006 (T2)	6 UOC General Education
MATH2089 (T1, T3)	MATS3007 (T2)	

Year 4		
MATS4100 (T1)	MATS4100 (T2)	MATS4100 (T3)
MATS4002 (T1)	MATS4004 (T2)	6 UOC Professional Elective (See Note 2)
6 UOC Professional Elective (See Note 2)	6 UOC General Education	ENGG4999 (See Note 3)

NOTES	This is intended as a guide only. Courses do not need to be studied in the exact structure that they appear here.
	See Program Structure on page 1 for a guide on the terminology and colour codes used in this progression plan.
	Note 1: First Year Engineering Elective: Click HERE to access the full list of first year engineering electives.
	Note 2: Professional Electives: MATS3003 (T1), MATS3005 (T1), MATS4001 (T2), MATS4003, MATS4005 (T3), MATS4006 (T3), MATS4007 (T3)
	Note 3: Students must also complete 60 days of approved industrial training throughout their degree. Click HERE for more info.

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2023 Commencing Students – Single Degree – Major in Functional Materials ([MATSF1](#))
Choose from available proposed courses in each year

Year 1		
CHEM1811 (T1)	DESN1000 (T1, T3)	MATS1192 (T1, T3)
PHYS1121 (T1, T2, T3) OR PHYS1131 (T1, T2, T3)	MATH1231 (T1, T2, T3) OR MATH1241 (T1, T2)	6 UOC First Year Engineering Elective (See Note 1)
MATH1131 (T1, T2, T3) OR MATH1141 (T1, T3)	COMP1911 (T1, T2, T3) OR ENGG1811 (T2)	

Year 2		
MATS2001 (T1)	MATS2004 (T2)	MATS2006 (T3)
MATS2003 (T1)	MATS2005 (T2)	MATS2007 (T3)
MATH2019 (T1)	MATS2008 (T2)	

Year 3		
MATS3001 (T1)	MATS3004 (T2)	6 UOC Professional Elective (See Note 2)
MATS3002 (T1)	MATS3006 (T2)	6 UOC General Education
MATH2089 (T1, T3)	MATS3007 (T2)	

Year 4		
MATS4100 (T1)	MATS4100 (T2)	MATS4100 (T3)
MATS3005 (T1)	6 UOC Professional Elective (See Note 2)	MATS4005 (T3)
6 UOC Professional Elective (See Note 2)	6 UOC General Education	ENGG4999 (See Note 3)

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2023 Commencing Students – Single Degree – Major in Materials Engineering ([MATSH1](#))

Choose from available proposed courses in each year

Year 1		
CHEM1811 (T1)	DESN1000 (T1, T3)	MATS1192 (T1, T3)
PHYS1121 (T1, T2, T3) OR PHYS1131 (T1, T2, T3)	MATH1231 (T1, T2, T3) OR MATH1241 (T1, T2)	6 UOC First Year Engineering Elective (See Note 1)
MATH1131 (T1, T2, T3) OR MATH1141 (T1, T3)	COMP1911 (T1, T2, T3) OR ENGG1811 (T2)	

Year 2		
MATS2001 (T1)	MATS2004 (T2)	MATS2006 (T3)
MATS2003 (T1)	MATS2005 (T2)	MATS2007 (T3)
MATH2019 (T1)	MATS2008 (T2)	

Year 3		
MATS3001 (T1)	MATS3004 (T2)	6 UOC Professional Elective (See Note 2)
MATS3002 (T1)	MATS3006 (T2)	6 UOC General Education
MATH2089 (T1, T3)	MATS3007 (T2)	

Year 4		
MATS4100 (T1)	MATS4100 (T2)	MATS4100 (T3)
6 UOC Professional Elective (See Note 2)	6 UOC Professional Elective (See Note 2)	6 UOC Professional Elective (See Note 2)
6 UOC Professional Elective (See Note 2)	6 UOC General Education	ENGG4999 (See Note 3)

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2023 Commencing Students – Single Degree – Major in Physical Metallurgy ([MATSE1](#))

Choose from available proposed courses in each year

Year 1		
CHEM1811 (T1)	DESN1000 (T1, T3)	MATS1192 (T1, T3)
PHYS1121 (T1, T2, T3) OR PHYS1131 (T1, T2, T3)	MATH1231 (T1, T2, T3) OR MATH1241 (T1, T2)	6 UOC First Year Engineering Elective (See Note 1)
MATH1131 (T1, T2, T3) OR MATH1141 (T1, T3)	COMP1911 (T1, T2, T3) OR ENGG1811 (T2)	

Year 2		
MATS2001 (T1)	MATS2004 (T2)	MATS2006 (T3)
MATS2003 (T1)	MATS2005 (T2)	MATS2007 (T3)
MATH2019 (T1)	MATS2008 (T2)	

Year 3		
MATS3001 (T1)	MATS3004 (T2)	6 UOC Professional Elective (See Note 2)
MATS3002 (T1)	MATS3006 (T2)	6 UOC General Education
MATH2089 (T1, T3)	MATS3007 (T2)	

Year 4		
MATS4100 (T1)	MATS4100 (T2)	MATS4100 (T3)
MATS3005 (T1)	MATS4001 (T2)	6 UOC Professional Elective (See Note 2)
6 UOC Professional Elective (See Note 2)	6 UOC General Education	ENGG4999 (See Note 3)

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	<p>Note 1: First Year Engineering Elective: Click HERE to access the full list of first year engineering electives.</p> <p>Note 2: Professional Electives: MATS3003 (T1), MATS4002 (T1), MATS4003, MATS4004 (T2), MATS4005 (T3), MATS4006 (T3), MATS4007 (T3)</p> <p>Note 3: Students must also complete 60 days of approved industrial training throughout their degree. Click HERE for more info.</p>

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2023 Commencing Students – Single Degree – Major in Process Metallurgy ([MATSG1](#))

Choose from available proposed courses in each year

Year 1		
CHEM1811 (T1)	DESN1000 (T1, T3)	MATS1192 (T1, T3)
PHYS1121 (T1, T2, T3) OR PHYS1131 (T1, T2, T3)	MATH1231 (T1, T2, T3) OR MATH1241 (T1, T2)	6 UOC First Year Engineering Elective (See Note 1)
MATH1131 (T1, T2, T3) OR MATH1141 (T1, T3)	COMP1911 (T1, T2, T3) OR ENGG1811 (T2)	

Year 2		
MATS2001 (T1)	MATS2004 (T2)	MATS2006 (T3)
MATS2003 (T1)	MATS2005 (T2)	MATS2007 (T3)
MATH2019 (T1)	MATS2008 (T2)	

Year 3		
MATS3001 (T1)	MATS3004 (T2)	6 UOC Professional Elective (See Note 2)
MATS3002 (T1)	MATS3006 (T2)	6 UOC General Education
MATH2089 (T1, T3)	MATS3007 (T2)	

Year 4		
MATS4100 (T1)	MATS4100 (T2)	MATS4100 (T3)
MATS3003 (T1)	MATS4003	6 UOC Professional Elective (See Note 2)
6 UOC Professional Elective (See Note 2)	6 UOC General Education	ENGG4999 (See Note 3)

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