

Materials Science & Engineering

AY2026 cohort (Jul 2026)

E-Scholars 3-years schedule (MSE)					
Maths requirement (8u) If passed MA1505 APT -> MA1505 + MA1512 + MA1513 Else MA1511+CE2407A+MA1512+MA1513		Internship requirement (10u) EG3611A Industrial Attachment EG3612/ETP3205 + CDE2605 EG3612/ETP3205 + CDE2605R EG3612/ETP3205 + CFG2101 1 sem NOC (~20u)		Summer	Units
				EG1311 Design and Make	4
				MA1505 Mathematics I	4
				CS1010E Programming	4
					12
Semester 1	Units	Semester 2	Units	Summer	Units
GEA1000 Quantitative Reasoning	4	MA1512 Differential Equations for Engineering	2	CFG2101 NUS Vacation Internship Programme	4
MLE2001A Materials Science & Engineering Principles & Practice II	4	MLE1001B Materials Science & Engineering Principles & Practice I	4		
DTK1234 Design Thinking	4	MLE2108 Mechanical and Structural Properties of Materials	4		
MA1513 Linear Algebra with Differential Equations	2	MLE2105 Electronic Properties of Materials	4		
PF1101A Fundamentals of Project Management and Finance	4	UTC#2	4		
UTC#1	4	UE	4		
UE	4	UE	4		
		UE	4		
Sub-total	26	Sub-total	30	Sub-total	4
Semester 3	Units	Semester 4	Units	Summer	Units
MLE2102 Thermodynamics and Renewable Energy Technologies	4	MLE4112 Foundational Advanced AI for Materials Science	4	EG3612 Vacation Industrial Attachment	6
MLE2103A Materials Kinetics & Processing	2	MSE Technical Elective	4		
MLE3101A Materials Characterization	3	MSE Technical Elective	4		
MLE3101 Materials Characterization Laboratory	3	UTC#4	4		
EE2211 Introduction to Machine Learning <i>or</i> EE2213 Introduction to Artificial Intelligence	4	UE	4		
EG2401A Engineering Professionalism	2	UE	4		
UTC#3	4				
UE	4				
Sub-total	26	Sub-total	24	Sub-total	6
Semester 5	Units	Semester 6	Units		
MLE4101B B.Eng. Dissertation or MLE4102A Design Project	4	MLE4101B B.Eng. Dissertation or MLE4102A Design Project	4		
MLE3103 Materials Design: Aerospace to Biomedical Applications	4	UE	4		
MLE3203 Engineering Materials	4	UE	4		
MLE3104 Polymeric and Composite Materials	4	UE	4		
Sub-total	16	Sub-total	16		
			Grand total	160	

Notes:

- If APT courses are not cleared, those courses (EG1311, MA1511, MA1505, CS1010E) must be cleared during the normal semesters
- Special internship course enrollment arrangement for E-Scholars - EG3612 and EG3611A can be enrolled as long as you have cleared 60 units.
- Important rules for NOC:
 - You MUST be in Singapore for Visa processing the semester BEFORE going to NOC.
 - You MUST have cleared at least 70 units before applying to NOC
- Note that UROP (CDE2605) may be taken in any regular semester or special term as long as you are at seniority 2.
- If you wish to read Common Curriculum courses before your department's recommended semester, please submit an appeal or select the courses from Round 2.
 - courses that require appeal: DTK1234, GEA1000, please email: DTK1234 - dtk1234@nus.edu.sg
 - GEA1000 - qadmin@nus.edu.sg