Material Science and Engineering

AY2024 cohort

Accurate as of May 2024

E-Scholars 3-years schedule (MSE)			
Semester 0 (APT)			
EG1311 Design and Make			4
MA1505 Mathematics I (4 units. It is mapped to MA1511 which is 2 units, + 2 units to UE)			4
CS1010E Programming Methodology			4
Sub-total			12
Semester 1		**Semester 2**	
GEA1000 Quantitative Reasoning	4	MLE2105 Electronic Properties of Materials	4
DTK1234 Design Thinking	4	MLE2001A Materials Science & Engineering Principles & Practice II	4
MA1513 Linear Algebra with Differential Equations	2	MA1512 Differential Equations for Engineering	2
MLE1001B Materials Science & Engineering Principles & Practice I	4	UTCP #2	4
PF1101 Fundamentals of Project Management	4	UE (or IE2141 if not staying at RC4)	4
CE2407A Engineering Uncertainty Analysis	2	UE	4
UTCP #1	4	UE	4
Sub-total	24	**Sub-total**	26
Semester 3		**Semester 4**	
MLE2102 Thermodynamics and Renewable Energy Technologies	4	NUS Overseas College (NOC) experience (20 units)*	20
MLE2103A Materials Kinetics & Processing	2		
MLE3101A Materials Characterization	3		
MLE3101 Materials Characterization Laboratory	3		
EE2211 Introduction to Machine Learning	4		
CDE2501 Liveable Cities	4		
UTCP #3	4		
UE*	2		
Sub-total	28	**Sub-total**	20
Semester 5		**Semester 6**	
MLE4101B BEng Dissertation OR MLE4102A Design Project	4	MLE4101B BEng Dissertation OR MLE4102A Design Project	4
MLE3103 Materials Selection & Design: Aerospace to Biomedical Applications	4	Technical Elective	4
MLE3111A Materials Properties & Processing Laboratory	2	MLE3112 Machine Learning Approaches in Materials Laboratory	2
CDE2000 Creating Narratives	4	UE	4
Technical Elective	4	UE	4
UTCP #4	4	UE	4
UE	4	UE	4
Sub-total	24	**Sub-total**	26
		Grand total	160

Notes:

1. If APT courses are not cleared, those courses must be cleared during the normal semesters
2. Important rules for NOC:
- You MUST be on campus the semester BEFORE going to NOC.
- You MUST have cleared at least 70 units before applying to NOC
3. *If not embarking on NOC, alternate module combinations to fulfil Industrial Attachment requirement (10 units) include:

a) EG3611A Industrial Attachment (10 units)

b) EG3612 Vacation Industrial Attachment (6 units) + EG2605 Undergraduate Research Opportunity (4 units)

c) EG3612 Vacation Industrial Attachment (6 units) + CFG2101 NUS Vacation Internship Programme (4 units) Note that EG3612 and EG3611A can be done as long as you have cleared 60 units.

d) EG2401A Engineering Professionalism (2 Units)

Note that UROP (EG2605) may be taken in any regular semester or special term as long as you are at seniority 2.

4. 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 may be selected from Round 2: PF1101, CDE2501, ES2631 (if not doing UTCP)
- courses that require appeal: EG2401A, DTK1234, GEA1000, EG1311, CDE2000, EE2211, IE2141 (if not staying in RC4) Please refer to the CDE common curriculum wiki for more info on common course pre-allocation and registration issues.

https://wiki.nus.edu.sg/display/eng/Pre-allocation+and+Registration+for+Common+Courses+in+CDE