

## Chemical Engineering

AY2025 cohort

Accurate as of July 2025

E-Scholars 3-years schedule (CHEM)				
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		
CN1101A Chemical Engineering Principles and Practice I	4	CN2102 Chemical Engineering Principles and Practice II	4	
CN2103 Mass & Energy Balance	4	EE2211 Introduction to Machine Learning or EE2213 Introduction to Artificial Intelligence	4	
GEA1000 Quantitative Reasoning	2	MA1512 Differential Equations for Engineering	2	
DTK1234 Design Thinking	4	PF1101A Project Management and Finance	4	
MA1513 Linear Algebra with Differential Equations	4	UTCP #2	4	
CE2407A Engineering Uncertainty Analysis	2	UE	4	
UTCP #1	4	UE	4	
Sub-total		24	Sub-total	26
Semester 3		Semester 4		
CN2109 Fluid Mechanics	4	NUS Overseas College (NOC) experience (20 units) *	20	
CN2111 Fundamentals of Biomolecular Engineering	4			
CN2105 Reaction Engineering	4			
CN2104 Chemical Engineering Thermodynamics	4			
UE	4			
UE	4			
UTCP #3 (Replaces CDE2501)	4			
Sub-total		28	Sub-total	20
Semester 5		Semester 6		
CN4119 Final Year Design Project OR CN4118 B.Eng. Dissertation	4	CN4119 Final Year Design Project OR CN4118 B.Eng. Dissertation	4	
CN2110 Heat and Mass Transfer	4	CN4102 Chemical Engineering Lab	4	
CN3104 Computer-Aided Chemical Process Simulation	4	CN4101 Process Control and Safety	4	
CN3105 Machine Learning in Chemical Engineering	4	UE	4	
CN3106 Separation Processes	4	UE	4	
UTCP #4	4	UE	4	
UE*	2			
Sub-total		26	Sub-total	24
Grand total			160	

Notes:

1. If APT courses are not cleared, those courses (EG1311, MA1511, CS1010E) must be cleared during the normal semesters

2. 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

3. \*If not embarking on NOC, alternate course combinations to fulfil Industrial Attachment requirement (10 units) include:

a) EG3611A Industrial Attachment (10 units)

b) EG3612 Vacation Industrial Attachment / ETP3205 Innovation & Enterprise Internship (6 units) + CDE2605 Undergraduate Research Opportunity (4 units)

c) EG3612 Vacation Industrial Attachment / ETP3205 Innovation & Enterprise Internship (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) EG3612 Vacation Industrial Attachment / ETP3205 Innovation & Enterprise Internship (6 units) + CDE2605R Undergraduate Research Experience (4 units)

Note that UROP (CDE2605) 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 require appeal: DTK1234, GEA1000, please email:

DTK1234 - dtk1234@nus.edu.sg

GEA1000 - qradmin@nus.edu.sg