

# BEng (MECH) Curriculum Structure

(2017-18 intake)

**In-depth MECH Option [6-9]**

Energy [9]

Materials [9]

Design [9]

Research [6]

## Routes for graduation:

- BEng(MECH) only = 109 credits + 11 free credits
- BEng(MECH) with ONE MECH Option = 118 credits + 2 free credits
- BEng(MECH) with TWO MECH Options = 127 credits
- BEng(MECH) with Research Option = 115 credits + 5 free credits
- BEng(MECH) with a Minor = 109 credits + 18 credits = 127 credits

Offer in Fall	Offer in Fall and Spring
Offer in Spring	Offer in Summer/ Winter

→ Pre-requisite

**MECH Core [33]**

**MECH4900 [6]**  
Final Yr. Design Project

**MECH3610 [3]**  
Control Principles

**MECH3830 [3]**  
Mechanical Lab

**MECH3630 [3]**  
Elec Technology

**MECH1990 [0 credit]**  
Industrial Training

**MECH3310 [3]**  
Heat Transfer

**MECH3520 [3]**  
Design & Manu II

**MECH3300 [3]**  
Energy Conversion

**MECH3420 [3]**  
Eng. Materials II

**MECH2907 [3]**  
Mechatronic Design & Prototyping

**MECH2210 [3]**  
Fluid Mechanics

**MECH2040 [3]**  
Solid Mechanics I

**MECH3030 [3]**  
Mechanism of Machinery

**MECH Fundamentals [18]**

**LANG4034 [3]**  
Tech Com II

**MECH2520 [3]**  
Design & Manu I

**MECH2020 [3]**  
Statics & Dynamics

**MECH2310 [3]**  
Thermodynamics

**ELEC2420 [3]**  
Basic Elec

**MECH2410 [3]**  
Eng. Materials I

**Eng. Fundamentals [22-26]**

**Computer Science [3-4]**  
COMP1021 or COMP1022P or  
COMP1022Q or COMP2011

**1000-level Science [3]**

**ENGG [0]**  
ENGG1010 and ENGG2010

**Physics [3]**  
PHYS1112 or  
PHYS1312

**LANG2030 [3]**  
Tech Com I

**MATH2011 [3]**

**MATH [3]**  
MATH2111[3] or  
MATH2350[3] or  
MATH2351[3]

**Calculus I [3-4]**  
MATH1012 or  
MATH1013 or  
MATH1023

**Calculus II [3]**  
MATH1014 or  
MATH1024

**Acc. Cal. [4]**  
MATH1020

**University Common Core [36]**

Humanities (H)

Soc Analysis (SA)

Sci & Tech (S&T)

English Com

Chinese Com

Healthy Lifestyle

Quantitative Reasoning (QR)

# Recommended Pattern of Study

for 4-year MECH major students admitted in 2017/18

Semester/Year	Course 1	Course 2	Course 3	Course 4	Course 5	Credits
Fall Year 1	MATH1012/ 1013/ 1020/1023**	U Core: Eng. I	COMP1021/ 1022P/1022Q/2011	U Core ME Intro	U Core	15
Spring Year 1	MATH1014/ 1024	U Core: Eng. II	1000-level Sci	PHYS1112/1312	U Core	15
Fall Year 2	MATH2011	ELEC2420	LANG2030	MECH2020	MECH2310	15
Spring Year 2	MATH2111/ 2350/ 2351	MECH2040	MECH2210	MECH2410	MECH2520	15
Winter <u>or</u> Summer Year 2	MECH1990					
Fall Year 3	MECH3030	MECH3310	MECH3610	Electives MECH 3300/3420/ 3520^	U Core	15
Spring Year 3	LANG4034	MECH2907	MECH3630	MECH3830	U Core	15
Fall Year 4	MECH4900	MECH Option	U Core	U Core	Free	15
Spring Year 4	MECH4900	MECH Option	MECH Option	U Core	U Core	15

**Note:** The recommended study pattern is for reference only and subject to change without prior notice.  
**\*\*** in which 3 credits can be reused in U Core – Quantitative Reasoning (QR)