

NUS DEPARTMENT OF MECHANICAL ENGINEERING
B.Eng(ME)(Hons) & B.Soc.Sci (Hons) Double Degree Programme
(Matriculating AY19/20 & AY20/21)

Degree Requirements	Modular Credits (MCs)	Comments
(A) University Level Requirements	Total 20 MCs	Modules will be classified as CA
General Education (GE) – 5 Pillars	20 MCs	Only 1 set is required
(B) FASS Programme Requirements	Total 16 MCs	Modules will be classified as C2
Level 1000 Exposure modules (Asian studies)	4 MCs	Asian Studies modules: CH1101E, CL1101E, JS1101E, MS1101E, SE1101E, SN1101E.
Level 1000 Exposure module (Social Sciences)	4 MCs	EC1101E
Level 1000 Exposure module (Humanities)	4 MCs	Humanities modules
FASS Writing Module	4 MCs	FAS1103 & CFG1002
(C) Economics Programme Requirements	Total 57 MCs	Modules will be classified as C2
Essential Modules**	24 MCs	EC2101, EC2102, EC3101, EC3102, EC3303 and EC3304
Elective Major Modules**	33 MCs	At least 25MCs must be of Level 4000 and the remaining 8MCs of Level 3000 Economic Modules.
(D) Engineering Programme Requirements	Total 80 MCs	Modules will be classified as C1
Engineering Modules (Common Engineering modules, Discipline Core modules, Electives)	80 MCs	Includes Faculty & Discipline requirement (core, elective, projects & FYP Thesis). It is not compulsory for DDP students to do the Industrial Attachment
(E) Common Modules	Total 28 MCs	Modules will be classified as CA
These modules map towards both degrees.	One common module (4MCs)	ST1131 See Table 1
	Two of the following modules (8MCs):- - One BEng Module - One BA (Econs) Module	See Table 2
	Integrated Honours Project (16MCs)	
(F) Unrestricted Elective Requirements	(Exempted)	
Unrestricted Elective	-	<i>Exempted under DDP Structure</i>
TOTAL	201 MCs (min)	

1. FAS1103 is a compulsory writing module which is pre-allocated in Year 1.
2. **EC2104 is replaced by a Level 2000 or Level 3000 EC-coded module.

3. The 16MCs XF4401 Integrated Honours Project replaces the 15MC Economics Honours Thesis, 8MCs BEng Dissertation and 8MCs ME Technical Electives. Students who are not taking XF4401(Integrated Honours Project) are required to do the following modules to fulfill each programme requirements: -

A) Students who are targeting Honours (Highest Distinction):

Engineering Programme

ME4101A B.Eng. Dissertation or ME4101B Mechanical Systems Design (8MCs)
 ME Technical Electives x 2 (8MCs)

FASS Programme

EC4401 Honours Thesis (15MCs)

B) Students who are not targeting Honours (Highest Distinction):

Engineering Programme

ME4101A B.Eng. Dissertation or ME4101B Mechanical Systems Design (8MCs)
 ME Technical Electives x 2 (8MCs)

FASS Programme

Econs Electives x 3 Level-4000 (15MCs)

**Semester Schedule for B.Eng. (M.E.) & B.Soc.Sci. (Hons.)(Economics) Double Degree Programme
(AY2019/2020 & AY2020/2021)**

Year 1						
Semester 1		MCs		Semester 2		MCs
MA1505	Mathematics I	4	C1 (*)	MA1512	Differential Equations for Engineering	2 C1
CS1010E	Programming Methodology	4	C1	MA1513	Linear Algebra & Differential Equations	2 C1
ME1102	Engineering Principles & Practice I	4	C1	ME2104	Engineering Principles & Practice II	4 C1
EC1101E	Introduction to Economic Analysis or its equivalent EC1301	4	C2(*)	EG1311	Design and Make	4 C1
FAS1103	Effective Workplace Communication	2	C2	FASS Elective Module (Level 2000/3000)		4 C2
CFG1002	Career Catalyst	2	C2	GEQ1000	Asking Questions (GE2) ¹	4 CA
GER1000	Quantitative Reasoning (GE 1) ¹	4	CA(*)	GE3 - GET Thinking and Expression ¹		4 CA
Sub-Total		24		Sub-Total		24
Year 2						
Semester 3		MCs		Semester 4		MCs
MLE1010	Materials Engineering Principles & Practice	4	C1	IE2141	Systems Thinking and Dynamics	4 C1
EE2211	Introduction to Machine Learning	4	C1	ME2102	Engineering Innovation and Modelling	4 C1
ME2112	Strength of Materials	4	C1	ME2115	Mechanics of Machines	4 C1
ME2134	Fluid Mechanics I	4	C1	ME2121	Engineering Thermodynamics	4 C1
EC2101	Microeconomic Analysis I	4	C2	EC2102	Macroeconomic Analysis I	4 C2
ES2531	Critical Thinking Writing	4	C1	ST1131/ST1131A Introduction to Statistics ¹		4 CA
Sub-Total		24		Sub-Total		24
Year 3						
Semester 5		MCs		Semester 6		MCs
FASS Level-1000 Exposure module (Humanities)		4	C2	ME2142	Feedback Control Systems	4 C1
EC3101	Microeconomic Analysis II	4	C2	EG2401A	Engineering Professionalism	2 C1
EC3303	Econometrics I	4	C2	EC3102	Macroeconomic Analysis II	4 C2
GE4 - GEH Human Culture ¹		4	CA	EC3304	Econometrics II	4 C2
ME2162	Manufacturing Processes ¹ (BEng Module as shown in Table D)	4	CA	B.SocSci	Elective Level-4000	5 C2
				GE5	Singapore Studies ¹	4 CA
Sub-Total		20		Sub-Total		23
Year 4						

Semester 7	MCs		Semester 8	MCs	
ME4101B Mechanical Systems Design or B.Eng.(Hons.)/B.Soc.Sci.(Hons.)[Economics] Integrated Dissertation/Project ²	8	CA	ME4101B Mechanical Systems Design or B.Eng.(Hons.)/B.Soc.Sci.(Hons.)[Economics] Integrated Dissertation/Project ²	8	CA
B.SocSci Elective Level-3000	4	C2	B.SocSci Elective Level-4000 x 2	10	C2
FASS Level-1000 Exposure module (Asian Studies)	4	C2	ME Technical Elective	4	C1
Pathway Requirement 1	4	C1	Pathway Requirement 2	4	C1
Sub-Total	20		Sub-Total	26	
Year 5					
Semester 9	MCs				
Any <u>one</u> B.A. (Econs) Module as shown in Table 2 ¹	4	CA			
B.SocSci Elective Level-4000 x 2	10	C2			
Free Elective ³	2	C1			
Sub-Total	16				
Total MCs	201				

Notes:

(*) C1 – Counted as B.Eng. degree requirement; C2 – Counted as 2nd degree requirement; CA – Double-counted as both degree requirements.

- 1) Common module that also satisfies FASS requirements (Table 1 and Table 2).
- 2) Students who are not taking XF4401(Integrated Honours Project) are required to do the following modules to fulfill each programme requirements: -

A) Students who are targeting Honours (Highest Distinction):

Engineering Programme

ME4101B Mechanical Systems Design **or** ME4101A B.Eng. Dissertation (8MCs)
2 ME Technical Electives (8MCs)

FASS Programme

EC4401 Honours Thesis (15MCs)

B) Students who are not targeting Honours (Highest Distinction):

Engineering Programme

ME4101B Mechanical Systems Design **or** ME4101A B.Eng. Dissertation (8MCs)
2 ME Technical Electives (8MCs)

FASS Programme

Econs Electives x 3 Level-4000 (15MCs)

- 3) Free Elective can be any modules. Students on SEP who have overflow of workload may use SEP Credits to count 2MCs to this Free Elective.

Table 1 – Essential Common Module

ST1131 Introduction to Statistic (For MSE & ME)	To replace the essential module EC2303 Foundations of Econometrics
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Table 2 - Selected Elective Modules *

BEng Programme	BEng modules that can be counted towards BA-Economics major requirements*	BA - Economics modules that can be counted towards BEng requirements*
Mechanical Engineering	<ul style="list-style-type: none"> • ME2162 Manufacturing Processes • ME4262 Automation in Manufacturing • EE4305 Fuzzy/Neural Systems for Intelligent Robotics (revised module title) <p>Added for all cohorts:</p> <ul style="list-style-type: none"> • ME4103 Mechanical Engineering and Society 	<ul style="list-style-type: none"> • EC3322 Industrial Organisation I • EC4322 Industrial Organization II • EC4372 Technology & Innovation • EC5324R Cost Benefit Analysis <p>Added for all cohorts:</p> <ul style="list-style-type: none"> • EC3385 Maritime & Shipping Economics • EC4311 Mathematical Economic Analysis