

NUS DEPARTMENT OF MECHANICAL ENGINEERING
B.Eng(ME)(Hons) & B.Soc.Sci (Hons)(Economics)Double Degree Programme
(Matriculating AY16/17)

Degree Requirements	Modular Credits (MCs)	Comments
(A) University Level Requirements	Total 20 MCs	
General Education (GE)	20 MCs	
(B) FASS Programme Requirements	Total 8 MCs	
Level 1000 Exposure modules (Asian studies)	4 MCs	Asian Studies modules: CH1101E, CL1101E, JS1101E, MS1101E, SE1101E, SN1101E.
Level 1000 Exposure modules (Social Sciences)	4 MCs	EC1301/EC1101E
(C) Economics Programme Requirements	Total 52 MCs	
Essential Modules	29 MCs	EC2101, EC2102, EC3101, EC3102, EC3303, EC3304, EC4103
Elective Major Modules	23 MCs	At least 15MCs must be of Level-4000 and the remaining 8MCs of Level-3000 Economics modules
(D) Engineering Programme Requirements	Total 78 MCs	
Engineering Modules (Common Engineering modules, Discipline Core modules, Electives)	78 MCs	
(E) Common Modules	Total 44 MCs	
These modules map towards both degrees.	FAS1102 (replaces ES2331) ¹	
	XF4401 ²	
	<u>Four</u> common essential modules (16 MCs): MA1505, MA1506, PH2208/PH2218/PH2223, ST1131/ST1131A.	See Table 1
	8MCs of electives: Any <u>One</u> BEng Module Any <u>One</u> BA(Econs) Module	See Table 2
(F) Unrestricted Elective Requirements	(Exempted)	
Unrestricted Elective	-	<i>Exempted under DDP Structure</i>
TOTAL	202 MCs (min)	

1. FAS1102 is a compulsory writing module which is pre-allocated in Year 1.

2. The 16MC 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 (8MCs)
2 ME Technical Electives (8MCs)

FASS Programme

EC4401 Honours Thesis (15MCs)

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

Engineering Programme

ME4101A B.Eng. Dissertation (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 (2016/2017)

Year 1						
Semester 1		MCs		Semester 2		MCs
MA1505	Mathematics I ²	4	CA (*)	MA1506	Mathematics II ²	4 CA
PC1431	Physics IE	4	C1 (*)	ES1531	Critical Thinking Writing	4 C1
EG1111	Engineering Principles & Practice I	6	C1	EG1112	Engineering Principles & Practice II	6 C1
EC1101E	Introduction to Economic Analysis or its equivalent EC1301	4	C2(*)	CS1010E	Programming Methodology	4 C1
FAS1102	Public Writing and Communication	4	CA	FASS Level-1000	Exposure module (Asian Studies)	4 C2
GER1000	Quantitative Reasoning (GE 1 - QR) ¹	4	CA	GEQ	Asking Questions (GE2) ¹	4 CA
Sub-Total		26		Sub-Total		26
Year 2						
Semester 3		MCs		Semester 4		MCs
ME2112	Strength of Materials	4	C1	ME2102	Engineering Innovation and Modelling	4 C1
ME2134	Fluid Mechanics I	4	C1	ME2121	Engineering Thermodynamics	4 C1
ME2151	Principles of Mechanical Engineering Materials	4	C1	ME3112	Mechanics of Machines	4 C1
ME3162	Manufacturing Processes ² (BEng Module as shown in Table D)	4	CA	EC2102	Macroeconomic Analysis I	4 C2
EC2101	Microeconomic Analysis I	4	C2	ST1131/ST1131A	Introduction to Statistics ²	4 CA
GE 3	Thinking and Expression ¹	4	CA	GE 4	Human Cultures ¹	4 CA
Sub-Total		24		Sub-Total		24
Year 3						
Semester 5		MCs		Semester 6		MCs
ME3103	Mechanical Systems Design	6	C1	ME2142	Feedback Control Systems	4 C1
ME Technical Elective 1		4	C1	EC3102	Macroeconomic Analysis II	4 C2
PH2223	Introduction To The Philosophy Of Technology (replaces EG2401)[Table 1] ²	4	CA	EC3303	Econometrics I	4 C2
EC3101	Microeconomic Analysis II	4	C2	Any <u>one</u> B.Eng. Module as shown in Table 2 ²		4 CA
B.SocSci Elective Level-3000		4	C2	GE 5	Singapore Studies ¹	4 CA
Sub-Total		22		Sub-Total		20
Year 4						

Semester 7	MCs		Semester 8	MCs	
B.Eng.(Hons.)/B.Soc.Sci.(Hons.)(Economics) Integrated Dissertation/Project ³	8	CA	B.Eng.(Hons.)/B.Soc.Sci.(Hons.)(Economics) Integrated Dissertation/Project ³	8	CA
Any <u>one</u> B.A. (Econs) Module as shown in Table 2 ²	4	CA	Pathway Requirement 1	4	C1
EC3304 Econometrics II	4	C2	B.SocSci Elective Level-3000	4	C2
EC4103 Singapore Economy: Practice & Policy (Offered in Semester 1 only)	5	C2	B.SocSci Elective Level-4000	5	C2
Sub-Total	21		Sub-Total	21	
Year 5					
Semester 9	MCs				
B.SocSci Elective Level-4000 x 2	10	C2			
Pathway Requirement 1	4	C1			
ME Technical Elective 2	4	C1			
Sub-Total	18				
Total MCs	202				

Notes:

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

- 1) Students are strongly encouraged to complete all the five GE modules latest by the end of Year 2.
- 2) Common module that also satisfies FASS requirements (Table 1).
- 3) 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 (8MCs)

2 ME Technical Electives (8MCs)

FASS Programme

EC4401 Honours Thesis (15MCs)

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

Engineering Programme

ME4101A B.Eng. Dissertation (8MCs)

ME Technical Electives x 2 (8MCs)

FASS Programme

Econs Electives x 3 Level-4000 (15MCs)

■ **Table 1 - 16 MCs of Essential Common Modules ***

Module Title	
MA1505 Mathematics I	These two modules are EC-recognized modules that students can use to fulfil Economics major requirements.
MA1506 Mathematics II	
PH2208 Applied Ethics / PH2218 Business Ethics / PH2223 Introduction to the Philosophy of Technology (fulfils the FoE requirement for the 3MC EG2401 Engineering Professionalism*)	This module is accepted in lieu of the FASS Faculty exposure requirement as it involves some humanities.
<ul style="list-style-type: none"> - CE2407 Engineering and Uncertainty Analysis (for CE & EVE students) - CN3421 Process Modelling & Numerical Simulation (for ChE students) - EE2012 Analytical Methods in Electrical and Computer Engineering (for EE students) - ST1131/ST1131A Introduction to Statistics (for ISE, MSE and ME students) - ST2334 Probability & Statistics (for CEG students) - BN2102 Bioengineering Data Analysis (for BME students) 	To replace the essential module EC2303: Foundations of Econometrics. These modules are already alternative prerequisites for the later essential module EC3303: Econometrics I. Conversely, if a DDP student has already read EC2303, he must still read one of the modules listed on the left side of the table.

■ **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	ME3162 Manufacturing Processes ME4262 Automation in manufacturing EE4305 Introduction to Fuzzy/Neural Systems	EC3322 Industrial Organisation I EC4322 Industrial Organisation II EC4372 Technology & Innovation EC5324R Cost Benefit Analysis