

NUS DEPARTMENT OF MECHANICAL ENGINEERING
B.Eng(ME)(Hons) & B.Soc.Sci (Hons)(Economics)Double Degree Programme
(Matriculating AY15/16)

Degree Requirements	Modular Credits (MCs)	Comments
(A) University Level Requirements	Total 20 MCs	
GEMs	20 MCs	
(B) FASS Programme Requirements	Total 69 MCs	
Level 1000 Exposure modules (Asian studies)	4 MCs (from the Asian Studies Division + 8MCs of common modules)	Asian Studies modules: CH1101E, CL1101E, JS1101E, MS1101E, SE1101E, SN1101E.
Single Major (Economics)	65MCs (+36MCs of common modules. The total of 101MCs includes XF4401 and at least 25MCs at level 4000 EC modules)	
(C) Engineering Programme Requirements	Total 75 MCs	Some engineering courses will have more than this. As it varies according to the engineering course, students should seek advice from their department on the recommended schedule.
Engineering Modules	75 MCs (+44MCs of common modules)	BEng Program requirements including Faculty & Discipline specific requirements (core, elective, projects & FYP Thesis). It is not compulsory for DDP students to do the Industrial Attachment
(D) Common Modules	Total 44 MCs	
These modules map towards both degrees.	Five common essential modules (20 MCs): MA1505, MA1506, PH2208 or PH2218 or PH2223, SC1101E or SC2202, ST1131A or equivalent.	See Table C
	24MCs of the following modules: ONE Integrated Project XF4401 (16MCs) involving FASS & FoE supervisors in relevant areas AND 8MCs of electives: Any <u>One</u> BEng Module Any <u>One</u> BA(Econs) Module	Relevant areas for an Integrated Project: time series analysis, game theory, fuzzy logic systems, operations research, urban/transportation economics, etc. See Table D
(E) Unrestricted Elective Requirements	(Exempted)	
Unrestricted Elective	-	<i>Exempted under DDP Structure</i>
TOTAL	208 MCs (min)	This is only the minimum requirement and will vary according to the engineering course. Students should seek advice from their department on the total MCs required to fulfil the DDP.

1. The 16MC XF4401 Integrated Honours Project replaces the 15MC Economics Honours Thesis/Project which is a constituent of the basic requirement of 40MC of level-4000 modules of the Economics major for the degree of BSocSci(Hons).
2. These 20 MCs of common modules replace 18 MCs in the BEng(Hons) Programme requirements.
3. PH2208 Applied Ethics or PH2218 Business Ethics or PH2223 Introduction to the Philosophy of Technology (fulfils the FoE requirement for the 3MC EG2401 Engineering Professionalism).
4. SC2202 Sociology of Work or SC1101E Making Sense of Society (fulfils the FoE requirement for the 3MC HR2002)
5. CE2407 or CN3421 or EE2012 or ST1131/ST1131A or ST2334 or MA3501 or BN2102

Semester Schedule for B.Eng. (M.E.) & B.Soc.Sci. (Hons.)(Economics) Double Degree Programme (2015/2016)

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 (*)	ES1501X	Critical Thinking and Expository Writing ³	4 C1
EG1108	Electrical Engineering	3	C1	EG1109M	Statics and Mechanics of Materials	4 C1
CS1010E	Programming Methodology	4	C1	ME2103	Engineering Visualisation and Modelling	3 C1
FASS Level-1000 Exposure module x1		4	C2 (*)	FASS Single Major (Economics) Module 1		4 C2
GER1000	Quantitative Reasoning (GE 1 - QR) ¹	4	CA	GE 2 ¹		4 CA
Sub-Total		23		Sub-Total		23
Year 2						
Semester 3		MCs		Semester 4		MCs
ME2113	Mechanics of Materials I	3	C1	ME2101	Fundamentals of Mechanical Design	4 C1
ME2121	Engineering Thermodynamics	4	C1	ME2114	Mechanics of Materials II	3 C1
ME2134	Fluid Mechanics I	4	C1	ME2135	Fluid Mechanics II	4 C1
ME2151	Principles of Mechanical Engineering Materials	4	C1	ME2143	Sensors and Actuators	4 C1
ME3162 ²	Manufacturing Processes (BEng Module as shown in Table D)	4	CA	ME3112	Mechanics of Machines	4 C1
GE 3 ¹		4	CA	GE 4 ¹		4 CA
Sub-Total		23		Sub-Total		23
Year 3						
Semester 5		MCs		Semester 6		MCs
ME3103	Mechanical Systems Design	6	C1	SC2202	Sociology of Work <u>or</u> SC1101E Making Sense of Society (replaces HR2002)[Table C] ²	4 CA
ME3122	Heat Transfer	4	C1	ME2142	Feedback Control Systems	4 C1
PH2223	Introduction To The Philosophy Of Technology (replaces EG2401)[Table C] ²	4	CA	ST1131A	Introduction to Statistics ²	4 CA
FASS Single Major (Economics) Module 2		4	C2	FASS Single Major (Economics) Module 4		4 C2
FASS Single Major (Economics) Module 3		4	C2	FASS Single Major (Economics) Module 5		4 C2
				Singapore Studies (SS) Module		4 CA
Sub-Total		22		Sub-Total		24

Year 4					
Semester 7	MCs		Semester 8	MCs	
B.Eng.(Hons.)/B.Soc.Sci.(Hons.)[Economics] Integrated Dissertation/Project ⁴	8	CA	B.Eng.(Hons.)/B.Soc.Sci.(Hons.)[Economics] Integrated Dissertation/Project ⁴	8	CA
FASS Single Major (Economics) Module 6	4	C2	FASS Single Major (Economics) Module 8	5	C2
FASS Single Major (Economics) Module 7	4	C2	FASS Elective Module (Level 3000)	4	C2
Any <u>one</u> B.A. (Econs) Module as shown in Table D	4	CA	FASS Elective Module (Level 3000)	4	C2
FASS Elective Module (Level 4000)	5	C2			
Sub-Total	25		Sub-Total	21	
Year 5					
Semester 9	MCs		Semester 10	MCs	
FASS Elective Module (Any Level)	4	C2			
FASS Elective Module (Level 4000) x 3	3 x 5 MCs	C2			
BEng Technical Elective	4	C1			
Sub-Total	23				
Total MCs	209				

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. UEM can be read in any semester and can be any modules out of your major requirements.
- 2) Common module that also satisfies FASS Single Major (Economics) Foundation Module requirements.
- 3) DDP students are encouraged to read ES1501X. However, in the event that students are not able to get ES1501X, they have to read GET1021 + ES2331 or IEM1201X + IEM2201X (For UTown Students)
- 4) For BEng (Hons) + BSocSci (Hons) (1st Class) students
Those who are not doing Integrated Project have to do :
 - 1) ME FYP-ME4101 (8 MCs) + 2 TEs (8MCs) =16MCs **and**
 - 2) EC FYP-EC4401 (15 MCs)

For BEng (Hons) + BSocSci (Hons) students

Students have to do :

- 1) ME FYP-ME4101 (8 MCs) + 2 TEs (8MCs)=16MCs **and**
- 2) 3 x Level 4000 EC Modules (15MCs)

Table C: List of 20 MCs of Common Modules, Contributing to FASS Requirements

Module Title	
MA1505 Mathematics I	These four modules are accepted in lieu of the FASS Faculty exposure requirements. They involve some social science and some humanities. Students must also complete 4 MCs of exposure modules from Asian Studies as part of the FASS requirements.
MA1506 Mathematics II	
PH2208 Applied Ethics (fulfils the FoE requirement for the 3 MC EG2401 Engineering Professionalism*)	
SC2202 Sociology of Work OR SC1101E Making Sense of Society (fulfils the FoE requirement for the 3 MC HR2002 Human Capital in Organizations*)	
ST1131/ST1131A Introduction to Statistics	To replace the essential module EC2303: Foundations of Econometrics. These modules are already alternative prerequisites for the later essential module EC3303: Econometrics I.

*These 20 MCs of common modules replace 18 MCs in the B.Eng.(Hons.) Programme requirements.

Table D: B.Eng. & B.A. modules that may be considered as common modules

B.Eng. Programme	B.Eng. modules that can be counted towards B.A.-Economics major requirements*	B.A. - Economics modules that can be counted towards B.Eng. requirements*
Mechanical Engineering	ME3162 Manufacturing Processes (Cost of Production) ME4262 Automation in manufacturing (economic cost-benefit analysis of automation) EE4305 Introduction to Fuzzy/Neural Systems	EC3322 Industrial Organisation I EC4372 Technology & Innovation EC4322 Industrial Organisation II EC5324 Economics & Cost Benefit Analysis