

NUS DEPARTMENT OF MECHANICAL ENGINEERING
B.Eng(ME)(Hons) & BA with major in Economics Double Degree Programme
(Matriculating AY14/15)

MODULAR REQUIREMENTS	MCS	NOTES
(A) UNIVERSITY LEVEL REQUIREMENTS	12	
General Education Modules (GEM)		
- GEM B (From Group B: Humanities and Social Sciences):	4	
- GEM A	4	
Singapore Studies (SS) Module	4	
Breadth		Exempted under DDP Structure
(B) FASS Programme Requirements	48	
Faculty level-1000 Exposure modules (at least one from each Division outside the student's major)	4	
Single Major (Economics)	44	Total number of EC electives for BA = 5 x level-3000/2000 (at least 2 at level-3000).
(C) Engineering Programme Requirements	96	
Engineering Modules	96	BEng Program requirements including Faculty & Discipline specific requirements (core, elective, projects & FYP)
(D) Common Modules	24	
Four Common Modules	16	See Table C
8 MCs of electives <ul style="list-style-type: none"> • Any <u>One</u> BEng Module • Any <u>One</u> BA(Econs) Module 	8	See Table D
(E) Unrestricted Elective Requirements	-	Exempted under DDP Structure
TOTAL:	180 MCS	

Sample Semester Schedule for B.Eng. (M.E.) & BA Double Degree Programme (AY2014/2015)

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	EG1109	Statics and Mechanics of Materials	4 C1
CS1010E	Programming Methodology	4	C1	ME2103	Engineering Visualisation and Modelling	3 C1
ME2151	Principles of Mechanical Engineering Materials	4	C1	FASS Single Major (Economics) Module 1		4 C2
FASS Level-1000 Exposure module		4	C2 (*)	FASS Single Major (Economics) Module 2		4 C2
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	3	C1	ME2114	Mechanics of Materials II	3 C1
ME2134	Fluid Mechanics I	4	C1	ME2135	Fluid Mechanics II	4 C1
ME3162	Manufacturing Processes ¹	4	C1	ME2143	Sensors and Actuators	4 C1
FASS Single Major (Economics) Module 3		4	C2	ME3112	Mechanics of Machines	4 C1
GEM B		4	CA	FASS Single Major (Economics) Module 4		4 C2
Sub-Total		22		Sub-Total		23
Year 3						
Semester 5		MCs		Semester 6		MCs
ME3101	Mechanical Systems Design I	4	C1	PH2208	Applied Ethics (replaces EG2401)[Table C] ²	4 CA
ME2142	Feedback Control Systems	4	C1	ME3102	Mechanical Systems Design II	4 C1
ME3122	Heat Transfer	4	C1	B.Eng. Technical Electives		4 C1
SC2202	Sociology of Work <u>or</u> SC1101E Making Sense of Society (replaces HR2002)[Table C] ²	4	CA	FASS Single Major (Economics) Module 6		4 C2
FASS Single Major (Economics) Module 5		4	C2	FASS Single Major Elective 1 (Level 2000)		4 C2
Sub-Total		20		Sub-Total		20

Year 4					
Semester 7	MCs		Semester 8	MCs	
ME4101A B.Eng. Dissertation	4	C1	ME4101A B.Eng. Dissertation	4	C1
Any <u>one</u> B.Eng. Module as shown in Table D ¹	4	CA	BEng Free Electives	9	C1
FASS Single Major Elective 3 (Level 2000)	4	C2	Any <u>one</u> B.A. (Econs) Module as shown in Table D	4	CA
FASS Single Major Elective 2 (Level 2000)	4	C2			
Sub-Total	16		Sub-Total	17	
Year 5					
Semester 9	MCs				
FASS Elective 4 (Level 3000)	4	C2			
FASS Elective 5 (Level 3000)	4	C2			
Singapore Studies	4	CA			
GEM A	4	CA			
Sub-Total	16				
Total MCs	180				

Notes:

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

- 1) Students who choose ME3162 as C1 would have to read another B.Eng Module from Table D to count as CA. Students who choose ME3162 as CA will have to read a TE to replace ME3162 C1 requirement.
- 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 ES1531 + ES2331 or IEM1201X + IEM2201X (For UTown Students)

Table C: List of 16 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 / PH2218 Business Ethics / PH2223 Intro to Philosophy of Technology (fulfils the FoE requirement for the 3MC 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*)	

*These 16 MCs of common modules replace 14 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