MECHANICAL ENGINEERING with ECONOMICS - Cohort AY2021/2022 onwards

Double Honours Degree Requirements	Units	Remarks	Classification
(A) CDE-CHS Common Curriculum			
Integrated Asian Studies: HSA1000 Asian Interconnections	4	Replaces Cultures and Connections. Can be fulfilled by approved USP courses and Global Social Thought for NUSC.	CA
Integrated Humanities: HSH1000 The Human Condition	4	Replaces Critique and Expression. Can be fulfilled by approved USP courses and Global Narratives for NUSC.	CA
Integrated Social Sciences: HSS1000 Understanding Social Complexity	4	Replaces Singapore Studies. Can be fulfilled approved USP Singapore Studies courses and Understanding the Social World: Singapore and Beyond for NUSC.	CA
Data Literacy: GEA1000 Quantative Reasoning with Data	4	Students can read ST1131, DSA1101, BT1101 or NUSC course (GEA1000N) in lieu of GEA1000.	CA
Digital Literacy: CS1010% Programming Methodology	4		CA
Communities and Engagement	4	Can be fulfilled by approved UTCP/RVRC/USP courses and Impact Experience Project for NUSC.	CA
CDE2000 Creating Narratives or FAS1101 Writing Academically: Arts and Social Sciences or SP1541 Exploring Science Communication through Popular Science or SP2271 Introduction to the Scientific Literature	4	Default is CDE2000 for CDE students, FAS1101/SP1541/SP2271 for CHS students. Students can take any of the 4 courses to satisfy this requirement. Can be fulfilled by approved UTCP/RVRC/USP courses and Thinking with	CA
CDE2501 Liveable Cities or HSI1000 How Science Works, Why Science Works or SP2274 Engineering a Lifelike Cell	4	Default is CDE2501 for CDE students, HSI1000/SP2271 for CHS students. Students can take any of the 3 courses to satisfy this requirement. Can be fulfilled by Science and Society for NUSC.	CA
IE2141 Systems Thinking and Dynamics (from CDE) or Scientific Inquiry II (from CHS)	4	Default is IE2141 for CDE students, Scientific Inquiry II for CHS. Students can take IE2141 or any Scientific Inquiry II course to satisfy this requirement. Replace with UEM for RC4 students.	CA
DTK1234 Design Thinking	4		CA
EE2211 Introduction to Machine Learning	4	CHS students who have read HS1501/IT2144 must still complete EE2211.	CA
EG1311 Design and Make	4	Replaces Interdisciplinary Course I	CA
PF1101 Fundamentals of Project Management	4	Replaces Interdisciplinary Course II	CA
CDE Integrated Project	8	ME4101A BEng Dissertation or ME4101B Mechanical Systems Design. **Can replace EC4401 Honours Thesis if approved by both CDE and CHS.**	CA
Sub-total for CDE-CHS Common Curriculum	**60**		
(B) Engineering Major			
Engineering core courses:			
EG2401A Engineering Professionalism	2	Replace with EG2101 Pathways to Engineering Leadership for E-Scholars. Can be replaced by TR3202% Start-up Internship Programme (2 Units out of 12 Units)	C1
EG3611A Industrial Attachment	10	Choose from a basket of courses to satisfy minimum 10 Units.	C1
ME core courses and electives:			
ME1102 Engineering Principles and Practice I	4		C1
ME2104 Engineering Principles and Practice II	4		C1
ME2102 Engineering Innovation and Modelling	4		C1
ME2112 Strength of Materials	4		C1
ME2115 Mechanics of Machines	4		C1
ME2121 Engineering Thermodynamics and Heat Transfer	4		C1
ME2134 Fluids Mechanics I	4		C1
ME2142 Feedback Control Systems	4		C1
ME2162 Manufacturing Processes	4		C1
ME Technical Elective	4		C1
Sub-total for Engineering Major	**52**		
(C) Economics Major			
Economics core courses:			
EC1101E Introduction to Economic Analysis	4		C2
EC2101 Microeconomic Analysis I	4		C2
EC2102 Macroeconomic Analysis I	4		C2
EC2303 Foundations for Econometrics	4		C2
EC3101 Microeconomic Analysis II	4		C2
EC3102 Macroeconomic Analysis II	4		C2
EC3303 Econometrics I	4		C2
Economics elective courses:			
EC-coded or EC-recognised courses	16	At least 4 Units at Level 3000. At least 12 Units at Level 4000 or higher.	C2
EC4401 Honours Thesis or 2 EC-coded or EC-recognised courses	8	**EC4401 may be replaced by CDE Integrated Project if approved by CDE and CHS.** EC-coded/EC-recognised courses must be Level 4000 or higher.	C2
Sub-total for Economics Major	**52**	**44 Units if CDE Integrated Project is double-counted toward EC4401.**	
(D) Common Courses			
MA1512 Differential Equations for Engineering and MA1513 Linear Algebra with Differential Equations	4	Replaces EC2104 Quantitative Methods for Economic Analysis.	CA
MA1505 Mathematics I	4	Double-counted as Level 2000 EC elective.	CA
Sub-total for Common Courses	**8**		
TOTAL (minimum)	**172**	**164 Units if CDE Integrated Project is double-counted toward EC4401.**	

Semester Schedule from Cohort AY2021/2022 onwards

Semester 1	Units	Semester 2	Units
ME1102 Engineering Principles and Practice I	4	ME2104 Engineering Principles and Practice II	4
ME2102 Engineering Innovation and Modelling	4	MA1512 Differential Equations for Engineering	2
MA1505 Mathematics I	4	MA1513 Linear Algebra with Differential Equations	2
CS1010E Programming Methodology	4	GEA1000 Quantitative Reasoning with Data	4
EG1311 Design & Make	4	DTK1234 Design Thinking	4
EC1101E Introduction to Economic Analysis	4	PF1101 Fundamentals of Project Management	4
		EC2101 Microeconomic Analysis I	4
		EC2303 Foundations for Econometrics	4
Sub-total	24	Sub-total	28

Semester 3	Units	Semester 4	Units
ME2121 Engineering Thermodynamics and Heat Transfer	4	ME2112 Strength of Materials	4
IE2141 Systems Thinking & Dynamics	4	ME2134 Fluid Mechanics I	4
HSS1000 Understanding Social Complexity[1]	4	EE2211 Introduction to Machine Learning	4
EC2102 Macroeconomic Analysis I	4	CDE2501 Liveable Cities	4
EC3101 Microeconomic Analysis II	4	HSH1000 The Human Condition[1]	4
EC3303 Econometrics I	4	Level 3000 EC elective	4
Sub-total	24	Sub-total	24

Semester 5	Units	Semester 6	Units
ME2115 Mechanics of Machines	4	EG3611A Industrial Attachment	10
ME2162 Manufacturing Processes	4	ME Technical Elective 1	4
EG2401A Engineering Professionalism	2		
HSA1000 Asian Interconnections[1]	4		
Communities and Engagement	4		
EC3102 Macroeconomic Analysis I	4		
Sub-total	22	Sub-total	14

Semester 7	Units	Semester 8	Units
ME4101A BEng Dissertation or ME4101B Mechanical Systems Design	4	ME4101A BEng Dissertation or ME4101B Mechanical Systems Design	4
ME2142 Feedback Control Systems	4	CDE2000 Creating Narratives[2]	4
EC4401 Honours Thesis or Level 4000 EC elective	4	EC4401 Honours Thesis or Level 4000 EC elective	4
Sub-total	12	Sub-total	12

Semester 9	Units
Level 4000 EC elective	4
Level 4000 EC elective	4
Level 4000 EC elective	4
Sub-total	12
Grand Total	172