INDUSTRIAL & SYSTEMS ENGINEERING - Single Honours

Single Honours Degree Requirements	MCs	Remarks	Classification
(A) University Level Requirements			
General education modules:			
GER1000 Quantitative Reasoning	4	Only 1 set needs to be completed for both BEng and BBA degrees. May be replaced by selected USP, RVRC or UTCP modules.	CA
GEQ1000 Asking Questions	4		CA
GET	4		CA
GEH	4		CA
GES	4		CA
Sub-total for University Level Requirements	**20**		
(B) Engineering Programme Requirements			
Faculty requirements:			
EG2401A Engineering Professionalism	2		C1
ES2351 Critical Thinking and Writing	4	Can be replaced by UWC2101% (for USP students), ES1601 (for RVRC students), or UTW2001% (for UTCP students).	CA
Foundation requirements:			
IE1111R Industrial & Systems Engrg Principles & Practice I	4		C1
IE2111 Industrial & Systems Engrg Principles & Practice II	4		C1
MA1505 Mathematics I	4		C1
MA1508E Linear Algebra for Engineers	4		C1
CS1010E Programming Methodology	4		C1
EE2211 Introduction to Machine Learning	4		C1
EG1311 Design and Make	4		C1
IE2141 Systems Thinking and Dynamics	4		C1
MLE1010 Materials Engineering Principles & Practices	4		C1
ST2334 Probability and Statistics	4		C1
PC1431 Physics IE or PC1432 Physics IIE	4		C1
ISE core modules:			
IE2100 Probability Models with Applications	4		C1
IE2110 Operations Research I	4	Replace with additional ISE technical elective if IE2110 is counted as Common Module	C1
IE3101 Statistics for Engineering Applications	4		C1
IE3110R Simulation	4		C1
ISE project and internship modules:			
IE3100R Systems Design Project	8		C1
IE4100R B.Eng. Dissertation or IE4102 Independent Study Module + ISE technical elective	8		C1
EG3611A Industrial Attachment or EG3612 Vacation Internship Programme	-	Exempted for DDP students	-
ISE pathway requirements and electives:			
IE4211 Modelling and Analytics or Level 5000 module	4		C1
IE4240 Project Management or Level 5000 module	4	Replace with additional ISE technical elective if IE4240 is counted as Common Module	C1
ISE technical elective	4		C1
Free electives	6		C1
Sub-total for Engineering Programme Requirements	**100**		
(C) FASS Faculty Requirements			
Level 1000 exposure module - Asian Studies	4	Choose one from the following: CH1101E, CL1101E, JS1101E, MS1102E, SE1101E, SN1101E	C2
Level 1000 exposure module - Social Sciences	4	EC1101E Introduction to Economic Analysis	C2
Level 1000 exposure module - Humanities	4	Choose one from the following: EL1101E, EN1101E, TS1101E, HY1101E, GET1029	C2
FAS1102 Public Writing and Communication or FAS1103 Effective Workplace Communication + CFG1002 Career Catalyst	4		C2
Sub-total for FASS Faculty Requirements	**16**		
(D) Economics Major Requirements			
Essential modules:			
EC2101 Microeconomic Analysis I	4		C2
EC2102 Macroeconomic Analysis I	4		C2
EC2104 Quantitative Methods for Economic Analysis	4		C2
EC3101 Microeconomic Analysis II	4		C2
EC3102 Macroeconomic Analysis II	4		C2
EC3303 Econometrics I	4		C2
Elective modules:			
EC elective 1 (Level 2000/3000)	4		C2
EC elective 2 (Level 3000)	4		C2
EC elective 2 (Level 3000)	4		C2
Sub-total for Economics Major Requirements	**36**		
(E) Common Modules			
BEng module	4	Select from list of Common Modules	CA
EC module	4		CA
Sub-total for Common Modules	**8**		
TOTAL (minimum)	**180**		