

AY2022-23 CURRICULUM FOR COMPUTER SCIENCE AND ECONOMICS (DOUBLE DEGREE PROGRAMME)

Option 1: 20-week Professional Internship (PI)

SUMMARY OF ACADEMIC UNIT REQUIREMENT								
Year of Study	Core		MPE		ICC		Broadening and Deepening Electives	Total AU
	CS	ECON	CS	ECON	C-Core	F-Core		
1	19	9	0	0	9	3	0	40
2	21	6	0	3	8	0	0	38
3	10	9	9	6	0	2	0	36
4	0	0	9	6	0	10	0	25
5	8	0	6	18	0	0	3	35
Total	58	24	24	33	17	15	3	174

Suggested Study Plan

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1003	Introduction to Computational Thinking & Programming	C (CS)	3	Nil
SC1013	Physics for Computing	C (CS)	2	Nil
MH1810	Mathematics I	C (CS)	3	Nil
EG1001	Engineers in Society	C (CS)	2	Nil
HE1001	Microeconomics I	C (Econ)	3	Nil
HE1002	Macroeconomics I	C (Econ)	3	Nil
CC0003	Ethics & Civics in a Multi-Cultural World	C-Core	2	Nil
CC0005	Healthy Living & Mental Well-being in an Aging Society	C-Core	3	Nil
			21	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1005	Digital Logic	C (CS)	3	Nil
SC1007	Data Structures & Algorithms	C (CS)	3	CE1103
MH1812	Discrete Mathematics	C (CS)	3	Nil
HE2001	Macroeconomics II	C (Econ)	3	HE1001
SC1015	Introduction to Data Science & AI	F-Core	3	CE1103
CC0001	Inquiry and Communication in an Interdisciplinary World	C-Core	2	Nil
CC0002	Navigating the Digital World	C-Core	2	Nil
			19	

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1004	Linear Algebra for Computing	C (CS)	3	MH1810
SC1006	Computer Organisation and Architecture	C (CS)	3	SC1005
SC2000	Probability and Statistics for Computing	C (CS)	3	MH1810
SC2002	Object Oriented Design and Programming	C (CS)	3	SC1003
HE3001	Microeconomics III	C (Econ)	3	HE2001
CC0006	Sustainability: Human Society Economic & Environment / Science &	C-Core	3	Nil
ML0004	Career & Entrepreneurial Development for the Future World	C-Core	2	Nil
			20	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC2001	Algorithm Design and Analysis	C (CS)	3	SC1007, MH1812
SC2005	Operating Systems	C (CS)	3	SC1006, SC1007
SC2006	Software Engineering	C (CS)	3	SC2002
HE2002	Macroeconomics II	C (Econ)	3	HE1002
MH1820	Introduction to Statistical Theory and Methods	MPE(Econ)	3	Nil
CC0007	Science & Technology for Humanity	C-Core	3	Nil
			18	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC2207	Introduction to Database	C (CS)	3	SC2001
SC2008	Computing Networks	C (CS)	3	SC1004, SC2000
SC3000	Artificial Intelligence	MPE-1	3	SC1007, SC1015, SC2000
SC3xxx	CS Prescribed Elective 1	MPE-1	3	Year 3 standing
HE2003	Econometrics I	C (Econ)	3	MH1820
HE3002	Macroeconomics III	C (Econ)	3	HE2002
			18	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC2079	Multidisciplinary Design Project	C (CS)	4	CE2101. CE2104
SC3010	Computer Security	MPE-1	3	CE2107
HE3003	Econometrics II	C (Econ)	3	HE2003
HE3xxx	Econ PE 1	MPE(Econ)	3	TBC
HE3xxx	Econ PE 2	MPE(Econ)	3	TBC
HW0288	Engineering Communication	F-Core	2	CC0001, Year 3 standing
			18	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC3xxx	CS Prescribed Elective 1	MPE - 1	3	Year 3 standing
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
HE3xxx	Econs PE 3	MPE(Econ)	3	TBC
HE3xxx	Econs PE 4	MPE(Econ)	3	TBC
			15	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC3079	Professional Internship	F-Core	10	Year 3 Standing
			10	

YEAR 5 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project	C	4	Year 4 standng
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
HE3xxx	Econs PE 5	MPE(Econ)	3	TBC
HE3xxx	Econs PE 6	MPE(Econ)	3	TBC
			16	

YEAR 5 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project (continue from previous semester)	C	4	Yest 4 standing
HE4xxx	Econs PE 7	MPE(Econ)	4	TBC
HE4xxx	Econs PE 8	MPE(Econ)	4	TBC
HE4xxx	Econs PE 9	MPE(Econ)	4	TBC
	Broadening & Deepening Elective	BDE	3	
			19	

**AY2022-23 CURRICULUM FOR
COMPUTER SCIENCE AND ECONOMICS
(DOUBLE DEGREE PROGRAMME)**

Option 2: 10-week Professional Attachment (PA)

SUMMARY OF ACADEMIC UNIT REQUIREMENT								
Year of Study	Core		MPE		ICC		Broadening and Deepening Electives	Total AU
	CS	ECON	CS	ECON	C-Core	F-Core		
1	19	9	0	0	9	3	0	40
2	21	6	0	3	8	0	0	38
3	10	9	9	0	0	7	0	35
4	0	0	15	12	0	0	3	30
5	8	(8)	0	18	0	0	5	31
Total	58	24	24	33	17	10	8	174

Suggested Study Plan

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1003	Introduction to Computational Thinking & Programming	C (CS)	3	Nil
SC1013	Physics for Computing	C (CS)	2	Nil
MH1810	Mathematics I	C (CS)	3	Nil
EG1001	Engineers in Society	C (CS)	2	Nil
HE1001	Microeconomics I	C (Econ)	3	Nil
HE1002	Macroeconomics I	C (Econ)	3	Nil
CC0003	Ethics & Civics in a Multi-Cultural World	C-Core	2	Nil
CC0005	Healthy Living & Mental Well-being in an Aging Society	C-Core	3	Nil
			21	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1005	Digital Logic	C (CS)	3	Nil
SC1007	Data Structures & Algorithms	C (CS)	3	CE1103
MH1812	Discrete Mathematics	C (CS)	3	Nil
HE2001	Macroeconomics II	C (Econ)	3	HE1001
SC1015	Introduction to Data Science & AI	F-Core	3	CE1103
CC0001	Inquiry and Communication in an Interdisciplinary World	C-Core	2	Nil
CC0002	Navigating the Digital World	C-Core	2	Nil
			19	

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1004	Linear Algebra for Computing	C (CS)	3	MH1810
SC1006	Computer Organisation and Architecture	C (CS)	3	SC1005
SC2000	Probability and Statistics for Computing	C (CS)	3	MH1810
SC2002	Object Oriented Design and Programming	C (CS)	3	SC1003
HE3001	Microeconomics III	C (Econ)	3	HE2001
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
ML0004	Career & Entrepreneurial Development for the Future World	C-Core	2	Nil
			20	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC2001	Algorithm Design and Analysis	C (CS)	3	SC1007, MH1812
SC2005	Operating Systems	C (CS)	3	SC1006, SC1007
SC2006	Software Engineering	C (CS)	3	SC2002
MH1820	Introduction to Statistical Theory and Methods	MPE(Econ)	3	Nil
HE2002	Macroeconomics II	C (Econ)	3	HE1002
CC0007	Science & Technology for Humanity	C-Core	3	Nil
			18	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC2207	Introduction to Database	C (CS)	3	SC2001
SC2008	Computing Networks	C (CS)	3	SC1004, SC2000
SC3000	Artificial Intelligence	MPE-1	3	SC1007, SC1015, SC2000
HE2003	Econometrics I	C (Econ)	3	MH1820
HE3002	Macroeconomics III	C (Econ)	3	HE2002
			15	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC2079	Multidisciplinary Design Project	C (CS)	4	CE2101. CE2104
SC3010	Computer Security	MPE-1	3	CE2107
SC3xxx	CS Prescribed Elective 1	MPE-1	3	Year 3 standing
HE3003	Econometrics II	C (Econ)	3	HE2003
HW0288	Engineering Communication	F-Core	2	CC0001, Year 3 standing
			15	

YEAR 3 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-Requisite
SC3026	Professional Attachment	F-Core	5	Year 3 Standing
			5	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
HE3xxx	Econ PE 1	MPE(Econ)	3	TBC
HE3xxx	Econ PE 2	MPE(Econ)	3	TBC
SC3xxx	CS Prescribed Elective 1	MPE-1	3	Year 3 standing
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
			15	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
SC4xxx	CS Prescribed Elective 2	MPE-2	3	Year 3 standing
HE3xxx	Econs PE 3	MPE(Econ)	3	TBC
HE3xxx	Econs PE 4	MPE(Econ)	3	TBC
	Broadening & Deepening Elective	BDE	3	
			15	

YEAR 5 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project	C	4	Year 4 standing
HE3xxx	Econs PE 5	MPE(Econ)	3	TBC
HE3xxx	Econs PE 6	MPE(Econ)	3	TBC
HE4xxx	Econs PE 7	MPE(Econ)	4	TBC
			14	

YEAR 5 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project (continue from previous semester)	C	4	Year 4 standing
HE4xxx	Econs PE 8	MPE(Econ)	4	TBC
HE4xxx	Econs PE 9	MPE(Econ)	4	TBC
	Broadening & Deepening Elective	BDE	3	
	Broadening & Deepening Elective	BDE	2	
			17	

ECON Core	ECON Core	32AUs	Sem	Pre-requisite
HE1001	Microeconomics I	3	Y1-S1	Nil
HE1002	Macroeconomics I	3	Y1-S2	Nil
HE2001	Microeconomics II	3	Y1-S2	HE1001
HE2002	Macroeconomics II	3	Y2-S2	HE1002
HE2003	Econometrics I	3	Y3-S1	MH1820
HE3001	Microeconomics III	3	Y2-S1	HE2001
HE3002	Macroeconomics III	3	Y3-S1	HE2002
HE3003	Econometrics II	3	Y3-S2	HE2003
FYP	Engineering Graduation Project	8	Y5	Year 4 standing
ECON PEs	ECON PEs	33AUs		
MH1820	Introduction to Statistical Theory and Methods	3	Y2-S2	Nil
Level 3xxx (6 courses)	Level 3xxx (6 courses)	18	S1/S2	
Level 4xxx (3 courses)	Level 4xxx (3 courses)	12	S1/S2	
ICC	ICC	32(PI)/ 27(PA) AUs		
ICC-CC	ICC-CC	17	Y1	
ICC-FC	ICC-FC	15(PI)/10(PA)		