

AY2025-2026
CURRICULUM FOR COMPUTER ENGINEERING AND ECONOMICS

DOUBLE DEGREE PROGRAMME

PI option : 20-WEEK Professional Internship

SUMMARY OF ACADEMIC UNIT REQUIREMENT									
Year of Study	Core		MPE		ICC			BDE	Total AU
	CE	ECON	CE	ECON	C-Core	Professional Series	Care, Serve, Learn		
Y1	20	9	0	0	8	3	0	0	40
Y2	18	6	0	3	6	0	3	0	36
Y3	16	9	6	3	0	2	0	0	36
Y4	3	0	6	9	0	10	0	0	28
Y5	8	0	6	18	0	1	0	2	35
Total	65	24	18	33	14	16	3	2	175

Recommended Course Schedule

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1013	Physics For Computing	Core-CE	2	Nil
SC1005	Digital Logic	Core-CE	3	Nil
EG1001	Engineers in Society	Core-CE	2	Nil
HE1001	Microeconomics I	Core-Econ	3	Nil
HE1002	Macroeconomics I	Core-Econ	3	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0015	Health & Wellbeing	C-Core	2	Nil
SC1003	Introduction to Computational Thinking & Programming	P-Series	3	Nil
HW0001	Introduction to Academic Communication	-	-	For student failed QET
HW0002	Calculus	-	-	For student not done Calculus
TOTAL			20	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1004	Linear Algebra for Computing	Core-CE	4	SC1003 (co-requisite)
SC1007	Data Structures & Algorithms	Core-CE	3	SC1003
MH1812	Discrete Mathematics	Core-CE	3	Nil
SC1008	C and C++ Programming	Core-CE	3	SC1003
HE2001	Microeconomics II	Core-Econ	3	HE1001
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	C-Core	2	Nil
			20	
			Year 1 Total AU	40

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1006	Computer Organisation & Architecture	Core-CE	3	SC1005 (co-requisite)
SC2000	Probability & Statistics for Computing	Core-CE	3	Nil
SC2107	Microprocessor System Design and Development	Core-CE	3	SC1006
HE3001	Microeconomics III	Core-Econ	3	HE2001
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
CSL	CSL (service learning course)- Part 1	CSL	3	(Continue in Semester 2)
TOTAL			18	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2001	Algorithm Design & Analysis	Core-CE	3	SC1007 & MH1812
SC2002	Object Oriented Design & Programming	Core-CE	3	SC1003 OR SC1007
SC2103	Digital Systems Design	Core-CE	3	SC1005
HE2002	Macroeconomics II	Core-Econ	3	HE1002
MH1820	Introduction to Statistical Theory and Methods	MPE-C	3	Nil
CC0007	Science & Technology for Humanity	C-Core	3	Nil
CSL	CSL (service learning course)- Part 2	CSL	-	(Continue from Semester 1)
			18	
			Year 2 Total AU	36

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2005	Operating Systems	Core-CE	3	SC1006 & SC1007
SC2006	Software Engineering	Core-CE	3	SC2002 (co-requisite)
SC2008	Computer Network	Core-CE	3	SC2000 & SC1004
SC2104	Sensors, Interfacing & Digital Control	Core-CE	3	SC1006
HE2003	Econometrics I	Core-Econ	3	MH1820

HE3002	Macroeconomics III	Core-Econ	3	HE2002
TOTAL			18	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2079	Multidisciplinary Design Project	Core-CE	4	Year 3 Standing
HE3003	Econometrics II	Core-Econ	3	HE2003
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-1	3	Refer to MPE listing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-2	3	Refer to MPE listing
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HW0288	Engineering Communication	P-Series	2	CC0001 & Year 3 standing
			18	
		Year 3 Total AU	36	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3102	Signals, Systems and Transforms	Core-CE	3	SC1004
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-3	3	Year 3 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-4	3	Year 3 Standing
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
TOTAL			18	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3920	Professional Internship (Graded)	P-Series	10	Year 3 Standing
TOTAL			10	
		Year 4 Total	28	

YEAR 5 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 1)	Core-CE	4	Year 4 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-5	3	Year 3 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE-6	3	Year 3 Standing
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
BDE	Broadening and Deepening Elective	BDE	2	Refer to Class Schedule
ML0015	Profession Preparation	P-Series	1	Nil
TOTAL			19	

YEAR 5 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 2)	Core-CE	4	Year 4 Standing
HE4xxx	Econs Prescribe Elective (Choose with in HE4xxx)	MPE-Econ 4	4	-
HE4xxx	Econs Prescribe Elective (Choose with in HE4xxx)	MPE-Econ 4	4	-
HE4xxx	Econs Prescribe Elective (Choose with in HE4xxx)	MPE-Econ 4	4	-
			16	
		Year 5 Total	35	
Grand Total (Year 1 to 5)			175	

Important Note:

- Students are required to complete 6 Major Prescribed Electives (MPE) courses, of which at least 4 must be at the SC4xxx level.
- In order to graduate with Highest Distinction, students must achieve minimum CGPA of 4.5 and at least a 'B+' grade for the Final Year Project.

MPE Structure of Computer Science (U24 and after)			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE-1	3	Any MPE
SC3xxx/SC4xxx	MPE-2	3	Any MPE
SC4xxx	MPE-3	3	MPE (Choose within SC4xxx)
SC4xxx	MPE-4	3	MPE (Choose within SC4xxx)
SC4xxx	MPE-5	3	MPE (Choose within SC4xxx)
SC4xxx	MPE-6	3	MPE (Choose within SC4xxx)
TOTAL		18	
Please refer the CE MPE Courses and Elective Focus Areas on CCDS website.			

MPE Structure of Economics (U21 and after)			
Course Code	Type	AU	Remarks
MH1820	MPE-C	3	Compulsory MPE
Level 3xxx (6 courses)	MPE-Econ 3	18	Choose with in HE3xxx
Level 4xxx (3 courses)	MPE-Econ 4	12	Choose with in HE4xxx
TOTAL		33	

AY2025-2026 AND LATER COHORTS CURRICULUM FOR COMPUTER ENGINEERING AND ECONOMICS

DOUBLE DEGREE PROGRAMME

PA option : 10-WEEK Professional Attachment

SUMMARY OF ACADEMIC UNIT REQUIREMENT

Year of Study	Core		MPE		ICC			BDE	Total AU
	CE	ECON	CE	ECON	C-Core	Professional Series	Care, Serve, Learn		
Y1	20	9	0	0	8	3	0	0	40
Y2	18	6	0	3	6	0	3	0	36
Y3	16	9	3	3	0	7	0	0	38
Y4	3	0	15	12	0	1	0	3	34
Y5	8	0	0	15	0	0	0	4	27
Total	65	24	18	33	14	11	3	7	175

Recommended Course Schedule

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1013	Physics For Computing	Core-CE	2	Nil
SC1005	Digital Logic	Core-CE	3	Nil
EG1001	Engineers in Society	Core-CE	2	Nil
HE1001	Microeconomics I	Core-Econ	3	Nil
HE1002	Macroeconomics I	Core-Econ	3	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0015	Health & Wellbeing	C-Core	2	Nil
SC1003	Introduction to Computational Thinking & Programming	P-Series	3	Nil
HW0001	Introduction to Academic Communication	-	-	For student failed QET
HW0002	Calculus	-	-	For student not done Calculus
TOTAL			20	

YEAR 1 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1004	Linear Algebra for Computing	Core-CE	4	SC1003 (co-requisite)
SC1007	Data Structures & Algorithms	Core-CE	3	SC1003
SC1008	C and C++ Programming	Core-CE	3	SC1003
MH1812	Discrete Mathematics	Core-CE	3	Nil
HE2001	Microeconomics II	Core-Econ	3	HE1001
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
ML0004	Career Design & Workplace Readiness in the V.U.C.A World	C-Core	2	Nil
			20	
			Year 1 Total AU	40

YEAR 2 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC1006	Computer Organisation & Architecture	Core-CE	3	SC1005 (co-requisite)
SC2000	Probability & Statistics for Computing	Core-CE	3	Nil
SC2107	Microprocessor System Design and Development	Core-CE	3	SC1006
HE3001	Microeconomics III	Core-Econ	3	HE2001
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
CSL	CSL (service learning course)- Part 1	CSL	3	(Continue in Semester 2)
			18	
TOTAL			18	

YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2001	Algorithm Design & Analysis	Core-CE	3	SC1007 & MH1812
SC2002	Object Oriented Design & Programming	Core-CE	3	SC1003 OR SC1007
SC2103	Digital Systems Design	Core-CE	3	SC1005
HE2002	Macroeconomics II	Core-Econ	3	HE1002
MH1820	Introduction to Statistical Theory and Methods	MPE-C	3	Nil
CC0007	Science & Technology for Humanity	C-Core	3	Nil
CSL	CSL (service learning course)- Part 2	CSL	-	(Continue from Semester 1)
			18	
			Year 2 Total AU	36

YEAR 3 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2005	Operating Systems	Core-CE	3	SC1006 & SC1007
SC2006	Software Engineering	Core-CE	3	SC2002 (co-requisite)
SC2008	Computer Network	Core-CE	3	SC2000 & SC1004

SC2104	Sensors, Interfacing & Digital Control	Core-CE	3	SC1006
HE2003	Econometrics I	Core-Econ	3	MH1820
HE3002	Macroeconomics III	Core-Econ	3	HE2002
TOTAL			18	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC2079	Multidisciplinary Design Project	Core-CE	4	Year 3 Standing
HE3003	Econometrics II	Core-Econ	3	HE2003
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE-1	3	Refer to MPE listing
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HW0288	Engineering Communication	P-Series	2	CC0001 & Year 3 standing
			15	

YEAR 3 SPECIAL SEMESTER				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3026	Professional Attachment	P-Series	5	Year 3 Standing
			5	
			Year 3 Total AU	38

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC3102	Signals, Systems and Transforms	Core-CE	3	SC1004
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Year 3 Standing
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
ML0015	Profession Preparation	P-Series	1	Nil
TOTAL			16	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Year 3 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Year 3 Standing
SC4xxx	Major Prescribe Elective (Choose within SC4xxx)	MPE	3	Year 3 Standing
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
	Broadening and Deepening Elective	BDE	3	Refer to Class Schedule
			18	
			Year 4 Total	34

YEAR 5 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 1)	Core-CE	4	Year 4 Standing
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HE4xxx	Econs Prescribe Elective (Choose with in HE4xxx)	MPE-Econ 4	4	-
	Broadening and Deepening Elective	BDE	2	Refer to Class Schedule
TOTAL			13	

YEAR 5 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-requisite/Remarks
SC4079	Final Year Project (Part 2)	Core-CE	4	Year 4 Standing
HE4xxx	Econs Prescribe Elective (Choose with in HE4xxx)	MPE-Econ 4	4	-
HE4xxx	Econs Prescribe Elective (Choose with in HE4xxx)	MPE-Econ 4	4	-
	Broadening and Deepening Elective	BDE	2	Refer to Class Schedule
			14	
			Year 5 Total	27
Grand Total (Year 1 to 5)			175	

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SC3xxx/SC4xxx	MPE-2	3	Any MPE
SC4xxx	MPE-3	3	MPE (Choose within SC4xxx)
SC4xxx	MPE-4	3	MPE (Choose within SC4xxx)
SC4xxx	MPE-5	3	MPE (Choose within SC4xxx)
SC4xxx	MPE-6	3	MPE (Choose within SC4xxx)
TOTAL		18	
Please refer the CE MPE Courses and Elective Focus Areas on CCDS website.			

MPE Structure of Economics (U21 and after)			
Course Code	Type	AU	Remarks
MH1820	MPE-C	3	Compulsory MPE
Level 3xxx (6 courses)	MPE-Econ 3	18	Choose with in HE3xxx
Level 4xxx (3 courses)	MPE-Econ 4	12	Choose with in HE4xxx
TOTAL		33	

ECONOMICS Course Listing				
CourseCode	Course Title	Type	AU	Pre-requisite/Remarks
HE1001	Microeconomics I	Core-Econ	3	Nil
HE1002	Macroeconomics I	Core-Econ	3	Nil
HE2001	Microeconomics II	Core-Econ	3	HE1001
HE2002	Macroeconomics II	Core-Econ	3	HE1002
HE2003	Econometrics I	Core-Econ	3	MH1820
HE3001	Microeconomics III	Core-Econ	3	HE2001
HE3002	Macroeconomics III	Core-Econ	3	HE2002
HE3003	Econometrics II	Core-Econ	3	HE2003
MH1820	Introduction to Statistical Theory and Methods	MPE-C	3	Nil
HE3xxx	Econs Prescribe Elective (Choose with in HE3xxx)	MPE-Econ 3	3	-
HE4xxx	Econs Prescribe Elective (Choose with in HE4xxx)	MPE-Econ 4	4	-