

**AY2022 AND LATER COHORTS CURRICULUM FOR COMPUTER
ENGINEERING & 2ND MAJOR IN SUSTAINABILITY (PI)**

Option 1: 20-week Professional Internship (PI)

SUMMARY OF ACADEMIC UNIT REQUIREMENT						
Year of Study	Major		Interdisciplinary Collaborative Core		BDE	Total AU
	Core	PE	Common Core (C-Core)	Foundational Core (F-Core)		
1	19	0	9	3	6	37
2	24	0	8	0	6	38
3	13	0	0	12	4	29
4	14	12	0	0	12	38
Total	70	12	17	15	28	142

Suggested Course Schedule

YEAR 1 SEMESTER 1					
Course	Course Title	Type	AU	Pre-Requisite / Remarks	
SC1003	Introduction to Computational Thinking & Programming	C	3	Nil	
SC1013	Physics for Computing	C	2	Nil	
MH1810	Mathematics I	C	3	Nil	
MH1812	Discrete Mathematics	C	3	Nil	
CC0003	Ethics & Civics in a Multi-Cultural World	C-Core	2	Nil	
CC0005	Healthy Living & Mental Wellbeing	C-Core	3	Nil	
HW0001	Introduction to Academic Communication	-	0	For student who failed QET	
	Sustainability - Core	BDE	3	Refer to syllabus	
			19		

YEAR 1 SEMESTER 2					
Course	Course Title	Type	AU	Pre-Requisite / Remarks	
SC1005	Digital Logic	C	3	Nil	
SC1007	Data Structures & Algorithms	C	3	SC1103	
SC1015	Introduction to Data Science and Artificial Intelligence	F-Core	3	SC1103	
EG1001	Engineers in Society / Sustainability - Core	C	2	Double-counted as SN Practice Core	
CC0001	Inquiry and Communication in an Interdisciplinary World	C-Core	2	Nil	
CC0002	Navigating the Digital World	C-Core	2	Nil	
	Sustainability - Core	BDE	3	Refer to syllabus	
			18		

YEAR 2 SEMESTER 1					
Course	Course Title	Type	AU	Pre-Requisite / Remarks	
SC1004	Linear Algebra for Computing	C	3	MH1810, SC1003	
SC1006	Computer Organisation & Architecture	C	3	SC1005	
SC2001	Algorithm Design and Analysis	C	3	SC1007, MH1812	
SC2002	Object Oriented Design and Programming	C	3	SC1003	
CC0007	Science & Technology for Humanity	C-Core	3	Nil	
	Sustainability - Core	BDE	3	Refer to syllabus	
			18		

YEAR 2 SEMESTER 2					
Course Code	Course Title	Type	AU	Pre-Requisite / Remarks	
SC2000	Probability and Statistics for Computing	C	3	MH1810	
SC2103	Digital Systems Design	C	3	SC1005	
SC2104	Sensors, Interfacing & Digital Control	C	3	SC1006	
SC2005	Operating Systems	C	3	SC1006, SC1007	
CC0006	Sustainability: Human Society Economic & Environment	C-Core	3	Nil	
ML0004	Career & Entrepreneurial Development for the Future	C-Core	2	Nil	
	Sustainability - Core	BDE	3	Refer to syllabus	
			20		

YEAR 3 SEMESTER 1				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC2006	Software Engineering	C	3	SC2002
SC2107	Microprocessor System Design and Development	C	3	SC1006
SC2008	Computer Networks	C	3	SC1004, SC2000
SC2079	Multidisciplinary Design Project	C	4	Year 3 standing
HW0288	Effective Communication 2	F-Core	2	CC0001
	Sustainability - Elective	BDE	4	Refer to syllabus
			19	

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

YEAR 4 SEMESTER 1				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC4079	Final Year Project	C	4	Year 4 standing*
SC3102	Signal, Systems and Transform	C	3	SC1004
SC3103	Embedded Programming	C	3	SC2107
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
	Sustainability - Elective	BDE	3	Refer to syllabus
	Sustainability - Elective	BDE	3	Refer to syllabus
			19	

YEAR 4 SEMESTER 2				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC4079	Final Year Project	C	4	*Continue from previous semester
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
	Sustainability - Elective	BDE	3	Refer to syllabus
	Sustainability - Interdisciplinary Project	BDE	3	Refer to syllabus
			19	
			142	

AY2022 AND LATER COHORTS CURRICULUM FOR COMPUTER ENGINEERING & 2ND MAJOR IN SUSTAINABILITY (PA)

Option 2: 10-week Professional Attachment (PA)

SUMMARY OF ACADEMIC UNIT REQUIREMENT						
Year of Study	Core	MPE	Known as GER for intakes before S1 AY21-22			Total AU
			C-Core	F-Core	BDE	
1	19	0	9	3	6	37
2	24	0	8	0	3	35
3	19	0	0	7	13	39
4	8	12	0	0	11	31
Total	70	12	17	10	33	142

Suggested Course Schedule

YEAR 1 SEMESTER 1				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC1003	Introduction to Computational Thinking &	C	3	Nil
SC1013	Physics for Computing	C	2	Nil
MH1810	Mathematics I	C	3	Nil
MH1812	Discrete Mathematics	C	3	Nil
CC0003	Ethics & Civics in a Multi-Cultural World	C-Core	2	Nil
CC0005	Healthy Living & Mental Wellbeing	C-Core	3	Nil
HW0001	Introduction to Academic Communication	-	0	For student who
	Sustainability - Core	BDE	3	Refer to syllabus
			19	

YEAR 1 SEMESTER 2				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC1005	Digital Logic	C	3	Nil
SC1007	Data Structures & Algorithms	C	3	SC1103
SC1015	Introduction to Data Science and Artificial Intelligence	F-Core	3	SC1103
EG1001	Engineers in Society / Sustainability - Core	C	2	Double-counted as SN Practice Core
CC0001	Inquiry and Communication in an Interdisciplinary	C-Core	2	Nil
CC0002	Navigating the Digital World	C-Core	2	Nil
	Sustainability - Core	BDE	3	Refer to syllabus
			18	

YEAR 2 SEMESTER 1				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC1004	Linear Algebra for Computing	C	3	MH1810, SC1003
SC1006	Computer Organisation & Architecture	C	3	SC1005
SC2001	Algorithm Design and Analysis	C	3	SC1007, MH1812
SC2002	Object Oriented Design and Programming	C	3	SC1003
CC0007	Science & Technology for Humanity	C-Core	3	Nil
	Sustainability - Core	BDE	3	Refer to syllabus
			18	

YEAR 2 SEMESTER 2				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC2000	Probability and Statistics for Computing	C	3	MH1810
SC2103	Digital Systems Design	C	3	SC1005
SC2104	Sensors, Interfacing & Digital Control	C	3	SC1006
SC2005	Operating Systems	C	3	SC1006, SC1007
CC0006	Sustainability: Human Society Economic &	C-Core	3	Nil
ML0004	Career & Entrepreneurial Development for the Future	C-Core	2	Nil
			17	

YEAR 3 SEMESTER 1				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC2006	Software Engineering	C	3	SC2002
SC2107	Microprocessor System Design and Development	C	3	SC1006
SC2008	Computer Networks	C	3	SC1004, SC2000
HW0288	Effective Communication 2	F-Core	2	CC0001
	Broadening and Deepening Electives	BDE	3	nil
	Sustainability - Elective	BDE	4	Refer to syllabus
			18	

YEAR 3 SEMESTER 2				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC3102	Signal, Systems and Transform	C	3	SC1004
SC3103	Embedded Programming	C	3	SC2107
SC2079	Multidisciplinary Design Project	C	4	Year 3 standing
	Sustainability - Core	BDE	3	Refer to syllabus
	Sustainability - Elective	BDE	3	Refer to syllabus
			16	

YEAR 3 Special Term				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC3126	Professional Attachment	F-Core	5	Year 3 Standing
			5	

YEAR 4 SEMESTER 1				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC4079	Final Year Project	C	4	Year 4 standing
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
	Sustainability - Elective	BDE	3	Refer to syllabus
			16	

YEAR 4 SEMESTER 2				
Course	Course Title	Type	AU	Pre-Requisite / Remarks
SC4079	Final Year Project	C	4	*Continue from previous
SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
	Broadening and Deepening Elective	BDE	2	Nil
	Sustainability - Interdisciplinary Project	BDE	3	Refer to syllabus
	Sustainability - Elective	BDE	3	Refer to syllabus
			15	
Total:			142	