AY2022-23
CURRICULUM FOR COMPUTER ENGINEERING

Exempted Polytechnic Students (PI and PA option)

PI option : 20-WEEK Professional Internship

SUMMARY OF ACADEMIC UNIT REQUIREMENT

Year of Study	Core	MPE	ICC Common - Core	ICC Foundational - Core	BDE	Total AU
1	25	0	9	3	0	37
2	31	0	8	0	0	39
3	10	3	0	12	0	25
4	4	9	0	0	0	13
Total	70	12	17	15	0	114

Recommended Course Schedule

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite
SC1003	Introduction to Computational Thinking & Programming	Core	3	Nil
SC1005	Digital Logic	Core	3	Nil
SC1013	Physics For Computing	Core	2	Nil
MH1810	Mathematics I	Core	3	Nil
EG1001	Engineers in Society	Core	2	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0005	Healthy Living & Wellbeing	C-Core	3	Nil
HW0001	Introduction to Academic Communication	-	-	For student who failed QET
			18	

YEAR 1 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite
SC1004	Linear Algebra for Computing	Core	3	SC1003 (co-requisite) & MH1810
SC1006	Computer Organisation & Architecture	Core	3	SC1005 (co-requisite)
SC1007	Data Structures & Algorithms	Core	3	SC1003
MH1812	Discrete Mathematics	Core	3	Nil
SC1015	Introduction to Data Science & Artificial Intelligence	F-Core	3	SC1003
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
CC0002	Navigating the Digital World	C-Core	2	Nil
			19	

Year 1 Total AU **37**

YEAR 2 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite
SC2000	Probability & Statistics for Computing	Core	3	MH1810
SC2001	Algorithm Design & Analysis	Core	3	SC1007 & MH1812
SC2104	Sensors, Interfacing & Digital Control	Core	3	SC1006
SC2107	Microprocessor System Design and Development	Core	3	SC1006
CC0007	Science & Technology for Humanity	C-Core	3	Nil
SC3102	Signals, Systems and Transforms	Core	3	SC1004
			18	

YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite
SC2002	Object Oriented Design & Programming	Core	3	SC1003 OR SC1007
SC2103	Digital Systems Design	Core	3	SC1005
SC2005	Operating Systems	Core	3	SC1006 & SC1007
SC3103	Embedded Programming	Core	3	SC2107
SC2079	Multidisciplinary Design Project	Core	4	Year 3 Standing
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
ML0004	Career & Innovative Enterprise for the Future World	C-Core	2	Nil
			21	

Year 2 Total AU **39**

YEAR 3 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC3079	Professional Internship	F-Core	10	Year 3 Standing
			10	

YEAR 3 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC4079	Final Year Project (Part 1)	Core	4	Year 4 Standing
SC2006	Software Engineering	Core	3	SC2002 (co-requisite)
SC2008	Computer Network	Core	3	SC2000 & SC1004
HW0288	Engineering Communication	F-Core	2	CC0001 & Year 3 standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
			15	

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Year 3 Total AU   **25**

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YEAR 4 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC4079	Final Year Project (Part 2)	Core	4	Year 4 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
			13	

YEAR 4 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
			0	

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Year 4 Total AU   **13**

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MPE Structure of Computer Engineering (U21 and after)			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
	Total	**12**	
Please refer the CE MPE Courses and Elective Focus Areas on SCSE websit.			

AY2022-23
CURRICULUM FOR COMPUTER ENGINEERING

Exempted Polytechnic Students (PI and PA option)

PA option : 10-WEEK Professional Attachment

SUMMARY OF ACADEMIC UNIT REQUIREMENT

Year of Study	Core	MPE	ICC		BDE	Total AU
			Common - Core	Foundational - Core		
1	25	0	9	3	0	**37**
2	31	0	8	5	0	**44**
3	14	12	0	2	5	**33**
4	0	0	0	0	0	**0**
Total	**70**	**12**	**17**	**10**	**5**	**114**

Recommended Course Schedule

YEAR 1 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite
SC1003	Introduction to Computational Thinking & Programming	Core	3	Nil
SC1005	Digital Logic	Core	3	Nil
SC1013	Physics For Computing	Core	2	Nil
MH1810	Mathematics I	Core	3	Nil
EG1001	Engineers in Society	Core	2	Nil
CC0003	Ethics & Civics in a Multicultural World	C-Core	2	Nil
CC0005	Healthy Living & Wellbeing	C-Core	3	Nil
HW0001	Introduction to Academic Communication	-	-	For student who failed QET
			18	

YEAR 1 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite
SC1004	Linear Algebra for Computing	Core	3	SC1003 (co-requisite) & MH1810
SC1006	Computer Organisation & Architecture	Core	3	SC1005 (co-requisite)
SC1007	Data Structures & Algorithms	Core	3	SC1003
MH1812	Discrete Mathematics	Core	3	Nil
SC1015	Introduction to Data Science & Artificial Intelligence	F-Core	3	SC1003
CC0001	Inquiry & Communication in an Interdisciplinary World	C-Core	2	Nil
CC0002	Navigating the Digital World	C-Core	2	Nil
			19	

Year 1 Total AU   **37**

YEAR 2 SEMESTER 1

Course Code	Course Title	Type	AU	Pre-requisite
SC2000	Probability & Statistics for Computing	Core	3	MH1810
SC2001	Algorithm Design & Analysis	Core	3	SC1007 & MH1812
SC2104	Sensors, Interfacing & Digital Control	Core	3	SC1006
SC2107	Microprocessor System Design and Development	Core	3	SC1006
CC0007	Science & Technology for Humanity	C-Core	3	Nil
SC3102	Signals, Systems and Transforms	Core	3	SC1004
			18	

YEAR 2 SEMESTER 2

Course Code	Course Title	Type	AU	Pre-requisite
SC2002	Object Oriented Design & Programming	Core	3	SC1003 OR SC1007
SC2103	Digital Systems Design	Core	3	SC1005
SC2005	Operating Systems	Core	3	SC1006 & SC1007
SC2008	Computer Network	Core	3	SC2000 & SC1004
SC2079	Multidisciplinary Design Project	Core	4	Year 3 Standing
CC0006	Sustainability: Society, Economy & Environment	C-Core	3	Nil
ML0004	Career & Innovative Enterprise for the Future World	C-Core	2	Nil
			21	

YEAR 2 SPECIAL SEMESTER

Course Code	Course Title	Type	AU	Pre-requisite
SC3026	Professional Attachment	F-Core	5	Year 3 Standing

Year 2 Total AU   **44**

YEAR 3 SEMESTER 1				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC4079	Final Year Project (Part 1)	Core	4	Year 4 Standing
SC2006	Software Engineering	Core	3	SC2002 (co-requisite)
SC3103	Embedded Programming	Core	3	SC2107
HW0288	Engineering Communication	F-Core	2	CC0001 & Year 3 standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
	Broadening and Deepening Elective	BDE	3	Refer to Class Schedule
			18	

YEAR 3 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-requisite**
SC4079	Final Year Project (Part 2)	Core	4	Year 4 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
SC3xxx/SC4xxx	Major Prescribe Elective (Choose within SC3xxx/SC4xxx)	MPE	3	Year 3 Standing
	Broadening and Deepening Elective	BDE	2	Refer to Class Schedule
			15	

Year 3 Total AU   **33**

MPE Structure of Computer Engineering (U21 and after)			
Course Code	Type	AU	Remarks
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
SC3xxx/SC4xxx	MPE	3	Choose within SC3xxx/SC4xxx
	Total	**12**	
Please refer the CE MPE Courses and Elective Focus Areas on SCSE websit.			