

**AY2022-23 CURRICULUM FOR COMPUTER ENGINEERING
2ND MAJOR IN DATA ANALYTICS**

SUMMARY OF ACADEMIC UNIT REQUIREMENT							
Year of Study	Major		Interdisciplinary Collaborate Core		2nd Major Compulsory & Electives	Broadening and Deepening Electives	Total AU
	Core	MPE	C-Core	F-Core			
1	25	0	9	3	0	0	37
2	27	0	8	0	3	0	38
3	10	0	0	12	6	0	28
4	8	12	0	0	9	3	32
Total	70	12	17	15	18	3	135

Suggested Study Plan

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1003	Introduction to Computational Thinking & Programming	C/2M-C	3	Nil
SC1005	Digital Logic	C	3	Nil
SC1013	Physics for Computing	C	2	Nil
MH1810	Mathematics I	C	3	Nil
EG1001	Engineers in Society	C	2	Nil
CC0003	Ethics & Civics in a Multi-Cultural World	C-Core	2	Nil
CC0005	Healthy Living & Wellbeing	C-Core	3	Nil
HW0001	Introduction to Academic Communication	-	0	For student who failed QET
			18	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC1004	Linear Algebra for Computing	C/2M-C	3	MH1810, SC1003
SC1006	Computer Organisation & Architecture	C	3	SC1005
SC1007	Data Structures & Algorithms	C/2M-C	3	SC1003
MH1812	Discrete Mathematics	C	3	Nil
SC1015	Introduction to Data Science & AI	F-Core	3	SC1003
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
SC2000	Probability and Statistics for Computing	C/2M-C	3	MH1810
SC2001	Algorithm Design and Analysis	C	3	SC1007, MH1812
SC2002	Object Oriented Design and Programming	C	3	SC1003
SC2104	Sensors, Interfacing & Digital Control	C	3	SC1006
SC2107	Microprocessor System Design and Development	C	3	SC1006
CC0006/CC0007	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
SC2103	Digital System Design	C	3	SC1005
SC2005	Operating Systems	C	3	SC1006, SC1007
SC2006	Software Engineering	C	3	SC2002
SC2008	Computer Networks	C	3	SC1004, SC2000
CC0007/CC0006	Science & Technology for Humanity/ Sustainability: Human	C-Core	3	Nil
SC2207	Introduction to Databases	2M-C	3	SC2001
			18	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC3102	Signal, Systems and Transform	C	3	SC1004
SC3103	Embedded Programming	C	3	SC2107
SC2079	Multidisciplinary Design Project	C	4	Year 3 standing
	Effective Communication 2	F-Core	2	
	2nd Major Elective	2M-E	3	TBC

	2nd Major Elective	2M-E	3	TBC
			18	

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

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project	C	4	Year 4 standing
SC3xxx/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
SC3xxx/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
SC4020	Data Analytics and Mining	2M-C	3	Year 3 standing
SC4024/SC4023	Data Visualisation/Big Data Management	2M-C	3	SC1003, SC2000/SC3020
			16	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
SC4079	Final Year Project	C	4	*Continue from previous semester
SC3xxx/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
SC3xxx/SC4xxx	Major Prescribed Elective	MPE	3	Year 3 standing
	2nd Major Elective	2M-E	3	TBC
	Broadening & Deepening Elective	BDE	3	
			16	