AY2023-24 CURRICULUM FOR BACHELOR OF ENGINEERING (CIVIL)
WITH SECOND MAJOR IN DATA ANALYTICS - PROFESSIONAL INTERNSHIP
(FIRST YEAR ADMISSION)

Last Updated :   22-Feb-23

SUMMARY OF ACADEMIC UNIT REQUIREMENT					
Year of Study	Core	MPE	CC	FC	BDE	Total AU
1	28	0	9	0	0	**37**
2	24	0	8	3	3	**38**
3	11	0	0	12	6	**29**
4	17	3	0	0	12	**32**
Total	**80**	**3**	**17**	**15**	**21**	**136**

* *Students without 'A' Level Physics will take 'PH1012 Physics A' (4AU).*

^ *The Course will be double counted towards Primary Programme and Second Major in Data Analytics*

YEAR 1 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
MH1810	Mathematics 1	C	3	
PH1011	Physics*	C	3	
FE1073	An Introduction to Engineering & Practices	C	1	
CV1011	Mechanics of Materials	C	4	
CV1012	Fluid Mechanics	C	3	
CC0001	Inquiry and Communication in the Interdisciplinary World	CC	2	
CC0002	Navigating the Digital World	CC	2	
			18	

YEAR 1 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
MH1811	Mathematics 2	C	3	MH1810
CV1013	Civil Engineering Materials	C	3	
CV1014 ^	Introduction To Computational Thinking	C	3	
CV2020	Water Resources Engineering	C	3	CV1012
EG1001	Engineers In Society	C	2	
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2	
CC0005	Healthy Living & Wellbeing	CC	3	
			19	

YEAR 2 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
CV2011	Structural Analysis I	C	3	CV1011
CV2013	Engineering Geology & Soil Mechanics	C	3	
CV2711	Civil Engineering Laboratory A	C	1	
MH2814 ^	Probability & Statistics	C	3	MH1810
CV0003	Introduction to Data Science and Artificial Intelligence	FC	3	CV1014
CC0006	Sustainability: Society, Economy & Environment	CC	3	
ML0004	Career and Entrepreneurial Development for the Future World	CC	2	
			18	

YEAR 2 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
CV1711	Engineering Drawing and 3D Building Information Modelling	C	1	
CV2012	Structural Analysis II	C	3	CV2011

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Course Code	Course Title	Type	AU	Pre-Requisite
CV2014	Geotechnical Engineering	C	3	CV2013
CV2019 ^	Matrix Algebra & Computational Methods	C	3	
CV2712	Civil Engineering Laboratory B	C	1	
CV3012	Steel Design	C	3	CV2011
CC0007	Science & Technology for Humanity	CC	3	
MH1403	Algorithms and Computing	BDE-DA	3	CV1014
			20	

YEAR 3 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
CV3011	Reinforced Concrete Design	C	3	CV2011
CV3013	Foundation Engineering	C	3	CV2013 & CV2014
CV3014	Transportation Engineering	C	3	
CV3017	Urban Water Circularity	C	2	CV1012
HW0288	Engineering Communication	FC	2	CC0001
SC4024	Data Visualization	BDE-DA	3	CV1014 & MH2814
EE4483	Artificial Intelligence & Data Mining	BDE-DA	3	CV2019 & CV0003
			19	

YEAR 3 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
CV3914	Professional Internship	FC	10	Year 3 standing &
				completed at least 4
				semesters of study
			10	

YEAR 4 SEMESTER 1				
Course Code	Course Title	Type	AU	Pre-Requisite
CV4012	Project Planning & Management	C	2	Year 4 Standing
CV4711	Seminars & Site Visits	C	1	
CV4911	Final Year Project	C	4	Year 4 Standing
CV4XXX	Major Prescribed Elective	MPE	3	Refer to Syllabus
SC2207	Introduction to Database	BDE-DA	3	MH1403
	Data Analytics Elective Course	BDE-DA	3	Refer to Syllabus
			16	

YEAR 4 SEMESTER 2				
Course Code	Course Title	Type	AU	Pre-Requisite
CV3016	Construction Technology & Processes	C	3	
CV4911	Final Year Project	C	4	Year 4 Standing
CV4912	Integrated Design Project	C	3	Year 4 Standing
	Data Analytics Elective Course	BDE-DA	3	Refer to Syllabus
	Data Analytics Elective Course	BDE-DA	3	Refer to Syllabus
			16	

Total AU for Graduation :　**136**