AY2026-27 CURRICULUM FOR BACHELOR OF ENGINEERING (CIVIL)
WITH SECOND MAJOR IN DATA ANALYTICS - PROFESSIONAL INTERNSHIP
(FIRST YEAR ADMISSION)

Last Updated : 31-Jul-26

SUMMARY OF ACADEMIC UNIT REQUIREMENT							
Year of Study	Major Requirements		Interdisciplinary Collaborative Core			Broadening & Deepening Electives	Total AU
	Core	Major PE	Common Core	Professional Series	Care, Serve, Learn		
1	29 [3]	0	7	0	0	0	**36 [3]**
2	23 [6]	0	7	3	3	3	**39 [6]**
3	11	0	0	11	0	6	**28**
4	19	3	0	2	0	12	**36**
Total	**82 [9]**	**3**	**14**	**16**	**3**	**21**	**139 [9]**

** Students without 'A' Level/Senior High School 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	
CV1711	Engineering Drawing and 3D Building Information Modelling	C	1	
CC0015	Health & Wellbeing	CC	2	
			17	

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	
CC0001	Inquiry and Communication in an Interdisciplinary World	CC	2	
CC0007	Science & Technology for Humanity	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	PS	3	CV1014
CC0006	Sustainability: Society, Economy & Environment	CC	3	
ML0004	Career Design and Workplace Readiness in a Dynamic World	CC	2	
			18	

YEAR 2 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite**
CV2012	Structural Analysis II	C	3	CV2011
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
CC0003	Ethics & Civics in a Multi-Cultural World	CC	2	
MH1403	Algorithms and Computing	BDE-DA	3	CV1014
	Service Learning	CSL	3	
			21	

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
SC4024	Data Visualization	BDE-DA	3	CV1014 & MH2814
EE4483	Artificial Intelligence & Data Mining	BDE-DA	3	CV2019 & CV0003
MLxxxx	Profession Preparation	PS	1	
			18	

YEAR 3 SEMESTER 2				
Course Code	**Course Title**	**Type**	**AU**	**Pre-Requisite**
CV3920	Professional Internship	PS	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 on Built Environment	C	1	
CV4911	Final Year Project	C	4	Year 4 Standing
CV4XXX	Major Prescribed Elective	MPE	3	Refer to Syllabus
HW0288	Engineering Communication	PS	2	CC0001 & Year 3 Standing
SC2207	Introduction to Database	BDE-DA	3	MH1403
	Data Analytics Elective Course	BDE-DA	3	Refer to Syllabus
			18	

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
CV4915	Integrated Design Project	C	5	Year 4 Standing
	Data Analytics Elective Course	BDE-DA	3	Refer to Syllabus
	Data Analytics Elective Course	BDE-DA	3	Refer to Syllabus
			18	

Total AU for Graduation : **139**