

**AY2023-24 CURRICULUM FOR BACHELOR OF ENGINEERING (CIVIL)
WITH UNIVERSITY SCHOLAR PROGRAMME
(FIRST YEAR ADMISSION)**

Last Updated : 22-Feb-23

SUMMARY OF ACADEMIC UNIT REQUIREMENT								
Year of Study	Core	MPE	USP-Core	USP-PE	CC	FC	BDE	Total AU
1	28	0	12	0	2	0	0	42
2	24	0	0	3	5	3	0	35
3	11	0	0	3	0	10	3	27
4	17	3	0	6	0	0	6	32
Total	80	3	12	12	7	13	9	136

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

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	
SP0001	Writing and Reasoning	USP-C	3	
SP0008	Living Well	USP-C	3	
CC0002	Navigating the Digital World	CC	2	
			22	

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	
SP0002	Ethics	USP-C	3	
SP0007	Fieldwork and Documentation	USP-C	3	
			20	

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
ML0004	Career and Entrepreneurial Development for the Future World	CC	2	
	USP Prescribed Electives 1	USP-PE	3	
			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
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	
			17	

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
	USP Prescribed Electives 2	USP-PE	3	
	Broadening & Deepening Electives 1	BDE	3	
			17	

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
	USP Prescribed Electives 3	USP-PE	3	
	Broadening & Deepening Electives 2	BDE	3	
			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
	USP Prescribed Electives 4	USP-PE	3	
	Broadening & Deepening Electives 3	BDE	3	
			16	

Total AU for Graduation : **136**