3.0 STUDY SCHEME

STUDY SCHEME 2016-2020 BACHELOR OF CIVIL ENGINEERING					
Department of Civil Engineering **Faculty of Engineering, Universiti Putra Malaysia**					
FIRST SEMESTER			**SECOND SEMESTER**		
CODE	**COURSE**	**CREDIT**	**CODE**	**COURSE**	**CREDIT**
YEAR 1					
ECV3111	Engineering Mechanics	3(3+0)	ECV3211	Mechanics of Materials	3(3+0)
ECV3112	Civil Engineering Materials	3(2+1)	ECV3311	Engineering Geology	3(2+1)
ECV3511	Geomatics Engineering	3(2+1)	EMM3518	Computer Aided Engineering Drawing	3(1+2)
ECC3001	Engineering Mathematics I	3(3+0)	ECC3002	Engineering Mathematics II	3(3+0)
SKP 2203	Islamic Civilization and Asian Civilization	2(2+0)	BBI2423	Academic Interaction and Presentation	3(2+1)
QKXXXXX	Co-curriculum with credit	1(0+1)	QKXXXXX	Co-curriculum with credit	1(0+1)
		15			**16**
YEAR 2					
ECV3212	Structural Analysis I	3(2+1)	ECV3113	Integrated Project	1(0+1)
ECV3312	Soil Mechanics I	3(3+0)	ECV3213	Structural Analysis II	3(3+0)
ECV3411	Hydraulics I	3(3+0)	ECV3313	Soil Mechanics II	3(2+1)
ECC3005	Computer Programming	3(2+1)	ECV3412	Hydraulics II	3(2+1)
SKP2101	Malaysian Nationhood	3(3+0)	ECC3004	Engineering Statistics	3(3+0)
BBI2424	Academic Writing	3(2+1)	SKP2204	Ethnic Relation	2(2+0)
			PRT2008	Agriculture and Man	2(2+0)
		18			**17**
YEAR 3					
ECV3214	Reinforced Concrete Structure Design	3(3+0)	ECV3001	Engineers and Society	3(2+1)
ECV3413	Environmental Engineering	4(3+1)	ECV3215	Design of Steel and Timber Structure	3(3+0)
ECV3611	Transportation Engineering	3(3+0)	ECV3314	Foundation Engineering	3(3+0)
ECV3612	Traffic Engineering	3(2+1)	ECV3414	Engineering Hydrology	3(3+0)
ECV3711	Construction Quantity Measurement	3(3+0)	ECV3613	Highway Engineering	3(2+1)
			ECV3712	Project Management	3(3+0)
		16			**18**
YEAR 4					
ECV4946	Civil Engineering Design Project	3(0+3)	ECV4949B	Bachelor's Project	4(0+4)
ECV4901	Industrial Training[1]	5(0+5)	ECVXXXX	Elective III[2]	3(3+0)
ECV4949A	Bachelor's Project	2(0+2)	ECVXXXX	Elective IV[2]	3(3+0)
ECVXXXX	Elective I[2]	3(3+0)	ECVXXXX	Elective V[2]	3(3+0)
ECVXXXX	Elective II[2]	3(3+0)			
		16			**13**
			Total Credit (Courses)		124
			Industrial Training		5
			TOTAL NUMBER OF CREDIT		**129**

[1] Industrial Training (ECV4901) is conducted for 10 weeks during the semester break after the 2nd semester, Year 3
[2] Elective courses (ECVXXXX) can be selected by the students based on the list of elective courses offered.

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ELECTIVE COURSES OPTION

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Students are required to choose five courses from any field below including the free elective.

FIRST SEMESTER			SECOND SEMESTER		
CODE	**COURSE**	**CREDIT**	**CODE**	**COURSE**	**CREDIT**
STRUCTURAL ENGINEERING					
ECV4211	Advanced Structural Analysis	3(3+0)	ECV4212	Design of Tall Buildings	3(3+0)
ECV4213	Bridge Engineering	3(3+0)	ECV4214	Prestress and Precast Structures	3(3+0)
ECV4215	Structural Dynamics and Earthquake	3(3+0)	ECV4216	Assessment and Rehabilitation of Structures	3(3+0)
GEOTECHNICAL AND GEOLOGICAL ENGINEERING					
ECV4311	Design of Foundation	3(3+0)	ECV4312	Retaining Structures	3(3+0)
ECV4313	Geo-Environmental Engineering	3(3+0)	ECV4314	Slope Engineering	3(3+0)
ECV4315	Tunnel Engineering	3(3+0)			
WATER AND ENVIRONMENTAL ENGINEERING					
ECV4411	River Engineering	3(3+0)	ECV4412	Water And Wastewater Treatment	3(3+0)
ECV4413	Groundwater Engineering	3(3+0)	ECV4414	Solid Waste Management Engineering	3(3+0)
ECV4415	Coastal Engineering	3(3+0)			
HIGHWAY AND TRANSPORTATION ENGINEERING					
ECV4611	Road Transportation System Analysis	3(3+0)	ECV4613	Road Construction and Maintenance	3(3+0)
ECV4612	Pavement Engineering	3(3+0)	ECV4614	Traffic Safety and Management	3(3+0)
FREE ELECTIVE					
			ECV4511	Geospatial Engineering	3(3+0)
			ECV4711	Construction Technology	3(3+0)
			ECV4712	Construction Industry Entrepreneurship	3(3+0)