

School: School of Engineering and School of Business Management			<< Declaration of BEng major		<< Declaration of BBA major		Student's Pathway										Remarks			
Program: Dual Degree Program (BEng in Civil and Environmental Engineering and BBA in Marketing)																				
Course Offering Dept. (course code prefix)	Course Code	Course Title / Courses List	Credits	Year 1 Fall	Year 1 Spring	Year 2 Fall	Year 2 Spring	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring	Year 5 Fall	Year 5 Spring	Sub-Total						
BEng in Civil and Environmental Engineering																				
Engineering Fundamental Courses																				
CIVL	1121	Note: CIVL 1121 OR COMP 1022P OR COMP 1023 OR COMP2011 OR COMP 2012H	3-5																	
CIVL	1022P	Introduction to Computation for Civil Engineers	3											3	Students should take COMP 1022P, COMP 1023, COMP 2011 or COMP 2012H which will also be used to substitute ISOM 2010 and to waive ISOM 2020					
COMP	1023	Introduction to Computing with Java	3		3															
COMP	2011	Programming with Python	4																	
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5																	
CHEM	1012	General Chemistry B: Atomic Structure, Molecules, and Bonding Theories	3	3										3						
		Note: [MATH 1013 OR MATH1023] AND [MATH 1014 OR MATH 1024] OR [MATH 1020]	4-6												COP students should take MATH 1013 or MATH 1020 or MATH 1023 to satisfy the requirements of both BEng and BBA degrees					
MATH	1013	Calculus IB	3		3	3														
MATH	1020	Accelerated Calculus	4																	
MATH	1023	Honors Calculus I	3																	
MATH	1024	Honors Calculus II	3																	
MATH	2011	Introduction to Multivariable Calculus	3			3								3						
MATH	2350	Applied Linear Algebra and Differential Equations	3			3								3						
		Note: PHYS 1112 OR PHYS 1312	3												3					
PHYS	1112	General Physics I with Calculus	3		3															
PHYS	1312	Honors General Physics I	3																	
Required Credits for Engineering Fundamental Courses			19-23	9	6	6	0	0	0	0	0	0	0	21						
Major Required Courses and Electives																				
CIVL	1000	Academic and Professional Development for Civil and Environmental Engineering I	0	0	0	0								0	Students admitted via school-based admission are exempted from taking CIVL 1000					
CIVL	1100	Discovering Civil and Environmental Engineering	3		3									3						
CIVL	2000	Academic and Professional Development for Civil and Environmental Engineering II	0			0	0							0						
CIVL	2020	Industrial and BIM Training	0			0*								0						
CIVL	2110	Statistics	3											3						
CIVL	2120	Mechanics of Materials	3			3	3							3	Student should attend the training modules in Year 2 Winter and Spring terms					
CIVL	2160	Modeling Systems with Uncertainties	3			3								3						
CIVL	2170	Infrastructure Systems Engineering and Management	3			3								3						
CIVL	2410	Environmental Assessment and Management	3			3								3						
CIVL	2510	Fluid Mechanics	3			3								3						
CIVL	2810	Construction Materials	3				3	3						3	This course will also be used to substitute ISOM 2500					
CIVL	3000	Academic and Professional Development for Civil and Environmental Engineering II	0				0	0						0						
CIVL	3020	Internship Training	0					0*						0						
		Note: CIVL3210 OR CIVL3610	3																	
CIVL	3210	Introduction to Construction Management	3											3						
CIVL	3610	Traffic and Transportation Engineering	3												3					
CIVL	3310	Structural Analysis	3				3							3						
CIVL	3420	Reinforced Concrete Design	3				3							3						
CIVL	3420	Water and Wastewater Engineering	3				3							3						
CIVL	3510	Hydrosystems Engineering	3				3	3						3						
CIVL	3730	Fundamentals of Geotechnics	3				3	3						3	CIVL 3020 is waived for BEng students who have taken and passed COMP 1023 or COMP 1022P or COMP2011 or COMP2012H. These COMP courses are active at their advanced section (highest) course as ISOM 2000.					
CIVL	3740	Geotechnical Analysis and Design	3				3	3						3						
CIVL	4000	Academic and Professional Development for Civil and Environmental Engineering IV	0					0	0					0						
		Note: CIVL 4910 OR CIVL 4920 (Students taking the Research Option must take CIVL 4920)	6									2	4	6						
CIVL	4910	Civil and Environmental Engineering Final Year Project	6																	
CIVL	4920	Civil and Environmental Engineering Final Year Thesis	6																	
CIVL	4950	Civil Engineering Capstone Design Project	3					3						3						
CIVL/ENGR		CIVL (Environmental) Electives (3 courses from the specified elective list. At least 2 courses (6 credits) should be selected from the "Restricted Electives", of which 1 course must be taken from CIVL 4450, CIVL 5450 or CIVL 5460.)	9							3	3	3		9						
BEng in Civil and Environmental Engineering Major Requirements			63	0	3	6	12	12	12	6	3	5	4	63						
BBA in Marketing																				
School Requirements																				
ACCT	2010	Principles of Accounting I	3	3										3	Students SHOULD take COMP 1022P, COMP 1023, COMP 2011 or COMP 2012H instead of ISOM 2010. ISOM 2020 is waived for BEng students who have taken and passed COMP 1023 or COMP 1022P or COMP2011 or COMP2012H. These COMP courses are active at their advanced section (highest) course as ISOM 2000.					
ACCT	2200	Principles of Accounting II	3						3					3						
ECON	2103	Note: ECON 2103 OR ECON 2113	3		3															
ECON	2113	Principles of Macroeconomics	3											3						
		Microeconomics	3																	
		Note: ECON 2123 OR ECON 3123	3												MARK 2120 is a major pre-requisite					
ECON	2123	Macroeconomics	3					3						3						
ECON	3123	Macroeconomic Theory I	3																	
FINA	2303	Financial Management	3				3							3						
ISOM	2010	Introduction to Information Systems	3	-	-	-	-	-	-	-	-	-	-	0						
ISOM	2020	Coding for Business	1	-	-	-	-	-	-	-	-	-	-	0						
ISOM	2600	Business Statistics	3	-	-	-	-	-	-	-	-	-	-	0						
ISOM	2600	Introduction to Business Analytics	1	-	-	-	-	-	-	-	-	-	-	0						
ISOM	2700	Operations Management	3					3						3						
MARK	2120	Marketing Management	3				3							3						
MGMT	2010	Business Ethics and the Individual	2						2					2						
MGMT	2110	Organizational Behavior	3			3								3						
MGMT	2130	Business Ethics and Social Responsibility	2							2				2						
		Note: MATH 1003 OR MATH 1013 OR MATH 1020 OR MATH 1023	3-4												COP students should take MATH 1013 and MATH 1023 or MATH 1020 to satisfy the requirements of both BEng and BBA degrees					
MATH	1003	Calculus and Linear Algebra	3																	
MATH	1013	Calculus I	3		(3)															
MATH	1020	Accelerated Calculus	4																	
MATH	1023	Honors Calculus I	3																	
Required Credits for School Requirements			39-40	3	3	3	6	3	3	5	2	1	0	29						
Major Required Courses and Electives																				
MARK	3220	Marketing Research	4					4						4	To graduate, students should complete ALL requirements as specified for COP.					
MARK	3420	Consumer Behavior	4						4					4						
MARK	4210	Strategic Marketing	4							4				4						
MARK		MARK 3050-level or above Electives (Any 3 courses of the subject and level as specified)	12								4	4	4	12						
Required Credits for Major Required Courses and Electives			24	0	0	0	0	4	4	4	4	4	4	24						
Additional Requirements for Dual Degree																				
Requirements for Dual Degree Program																				
TEMG	1011	T&M Professional Activities I	0	0	0	0								0	To graduate, students should complete ALL requirements as specified for COP.					
TEMG	1012	T&M Professional Activities II	0			0	0							0						
TEMG	1013	T&M Professional Activities III	0					0	0					0						
TEMG	1014	T&M Professional Activities IV	0							0	0			0						
TEMG	1015	T&M Professional Activities V	0									0	0	0						
TEMG	3050	T&M Case Analysis and Product Innovation	3		3									3						
TEMG	4950	T&M Corporate Consulting Project	3-5								4			4						
Required Credits for Additional Requirements			7	0	3	0	0	0	0	0	4	0	0	7						
University Common Core Requirement																				
CORE	C3 - C6	U CORE - Others	21			3				3	3	6	6	21						
CORE	C1 & C2	U CORE - English Language	6	3	3									6						
HAWA	1905	Behavioral Foundations of University Education: Health, Mindsets, and Wellness	3	1	2									3						
Sub-total for University CORE			30	4	5	3	0	0	0	3	3	6	6	30						
Term load (incl. term credits)																				
16 20 18 18 19 19 18 18 16 16 14 174																				