

School:		School of Engineering and School of Business Management			Student's Pathway										Remarks
Program:		Dual Degree Program (BEng in Civil and Environmental Engineering and BBA in Economics)			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	
Course Offering Dept. (course code prefix)	Course Code	Course Title / Courses List	Credits												
<b>BEng in Civil and Environmental Engineering</b>															
<b>Major Requirements</b>															
<b>Engineering Fundamental Courses</b>															
COMP	1021	Note: COMP1021 OR COMP1022P OR COMP2011 OR COMP2012H Introduction to Computer Science	3-5												
COMP	1022P	Introduction to Computing with Java	3		3										3
COMP	2011	Programming with C++	4												
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5												
ENGG	1010	Academic Orientation	0	0	0										0
CHEM	1010	Note: CHEM 1010 OR CHEM 1020 General Chemistry IA	3	3											3
CHEM	1020	General Chemistry IB	3												
LANG	2030	Technical Communication I	3	-	-	-	-	-	-	-	-	-	-	-	0
MATH	1012	Note: (MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024) OR (MATH 1020) Calculus IA	4-7												
MATH	1013	Calculus IB	4												
MATH	1014	Calculus II	3	3	3										6
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
PHYS	1112	Note: PHYS 1112 OR PHYS 1312 General Physics I with Calculus	3	3											3
PHYS	1312	Honors General Physics I	3												
<b>Required credits for Engineering Fundamental Courses</b>			22-27												21
<b>Major Required Courses and Electives</b>															
CIVL	1010	Academic Professional Development I	0			0	0								0
CIVL	1100	Discovering Civil and Environmental Engineering	3			3									3
CIVL	2010	Academic Professional Development II	0					0	0						0
CIVL	2020	Industrial and BIM Training	0			0*	0								0
CIVL	2110	Statics	3			3									3
CIVL	2120	Mechanics of Materials	3				3								3
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
CIVL	3010	Academic Professional Development III	0						0	0					0
CIVL	3020	Internship Training	0							0*					0
CIVL	3210	Note: CIVL3210 OR CIVL3610 Introduction to Construction Management	3						3						3
CIVL	3610	Traffic and Transportation Engineering	3												
CIVL	3310	Structural Analysis	3					3							3
CIVL	3320	Reinforced Concrete Design	3						3						3
CIVL	3420	Water and Wastewater Engineering	3						3						3
CIVL	3510	Hydrosystems Engineering	3					3							3
CIVL	3730	Fundamentals of Geotechnics	3						3						3
CIVL	3740	Geotechnical Analysis and Design	3							3					3
CIVL	4910	Note: CIVL 4910 OR CIVL 4920 (Students taking the Research Option must take CIVL 4920) Civil and Environmental Engineering Final Year Project	6								3	3			6
CIVL	4950	Civil and Environmental Engineering Final Year Thesis Civil Engineering Capstone Design Project	6										3	3	6
ENGG	2010	Engineering Seminar Series	0			0	0	0	0						0
LANG	4033	Technical Communication II for Civil and Environmental Engineering	3									3			3
CIVL	4450	Note: CIVL4450 OR CIVL 5450 OR CIVL5460 Carbon Footprint Analysis and Reduction	3							3					3
CIVL	5450	Hazardous Waste Treatment and Site Remediation	3								3				3
CIVL	5460	Landfill Engineering and Design	3									3			3
CIVLSENG		CIVL (Environmental) Electives [2 courses from the specified elective list. At least 1 course (3 credits) should be selected from the "Restricted Electives"]  Restricted electives: at least 1 course AND (CIVL: Any CIVL courses at 4000-level or above except those listed as "Restricted Electives" from the list OR SENG: Any 3000-level or above courses offered by the Engineering School or engineering departments other than CIVL)	6									3	3		6
<b>Required credits for Major Requirements Courses and Electives</b>			66												66
<b>BBA in Economics</b>															
<b>School Requirements</b>															
ACCT	2010	Principles of Accounting I	3	3											3
ACCT	2200	Principles of Accounting II	3						3						3
ECON	2103	Note: ECON 2103 OR ECON 2113 Principles of Microeconomics	3			3									3
ECON	2113	Microeconomics	3												
ECON	2123	Note: ECON 2123 OR ECON 3123 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	2500	Business Statistics	3	-	-	-	-	-	-	-	-	-	-	-	0
ISOM	2600	Introduction to Business Analytics	1				1								1
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
SBMT	1111	Business Student Induction	0	-	-	-	-	-	-	-	-	-	-	-	0
LABU	2040	Business Case Analyses	3	-	-	-	-	-	-	-	-	-	-	-	0
LABU	2060	Effective Communication in Business	3							3					3
MATH	1003	Note: MATH 1003 OR MATH 1012 OR MATH 1013 OR MATH 1020 OR MATH 1023 Calculus and Linear Algebra	3-4												
MATH	1012	Calculus IA	4	(3)											0
MATH	1013	Calculus IB	3												
MATH	1020	Accelerated Calculus	4												
MATH	1023	Honors Calculus I	3												
<b>Required credits for School Requirements</b>			43-44												32
<b>Major Requirements</b>															
<b>Major Required Courses and Electives</b>															
ECON	3014	Managerial Microeconomics	4					4							4
ECON	3024	Managerial Macroeconomics	4						4						4
ECON	3334	Introduction to Econometrics	4							4					4
ECON	4670	Economics Research and Communication	0									0			0
ECON		ECON 4000-level Electives (Any 3 courses of the subject and level as specified)	11								4	4	3		11
<b>Required credits for Major Required Courses and Electives</b>			23												23
<b>Additional Requirements</b>															
<b>Requirements for Dual Degree Program</b>															
<b>Required Courses</b>															
TEMG	1010	T&M Professional Activities	0	0	0	0	0	0	0	0	0	0	0	0	0
TEMG	3950	T&M Case Analysis and Product Innovation	3		3										3
TEMG	4950	T&M Corporate Consulting Project	3-5					4							4
<b>Required credits for Additional Requirements</b>			7												7
<b>University CORE</b>															
CORE	C3 - C12	U CORE - Others	30		6					9	6	3	6		30
CORE	C1 & C2	U CORE - English Language	6	3	3										6
<b>Sub-total for University CORE</b>			36												36
Term load (excl. free credits)															
15 18 20 19 20 19 19 18 19 15															
185##															

Notes:

( ) indicates the reuse of the same course to fulfill more than one requirement.

\* Courses offered in winter term

^ Courses offered in summer term

--- denotes the course/requirement is either waived or substituted

## To graduate, students should complete all requirements as specified for DDP.

\*\*Remarks on course(s):