

<< Declaration of
BEng major << Declaration of
BBA major

School:		School of Engineering and School of Business Management			Student's Pathway										Remarks		
Program:		Dual Degree Program (BEng in Chemical Engineering and BBA in Management)			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	
Course Offering Dept. (course code prefix)	Course Code	Course Title / Courses List	Credits														
BEng in Chemical Engineering																	
Major Requirements																	
Engineering Fundamental Courses																	
COMP	1021	Note: COMP1021 OR COMP1022P OR COMP2011 OR COMP2012H	3-5														
COMP	1022P	Introduction to Computer Science	3														
COMP	2011	Introduction to Computing with Java	3	3											3	Students should take COMP1021 which will also be used to substitute ISOM 2010 and to waive ISOM 2020	
COMP	2012H	Programming with C++	4														
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5														
CHEM	1020	General Chemistry I	3	3											3		
LANG	2030	Technical Communication I	3												0	Waived for DDP students	
		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7														
MATH	1012	Calculus IA	4														
MATH	1013	Calculus IB	3	3	3										6		
MATH	1014	Calculus II	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		
PHYS	1112	Note: PHYS 1112 OR PHYS 1312	3														
PHYS	1312	General Physics I with Calculus	3												3		
PHYS	1312	Honors General Physics I	3														
Required credits for Engineering Fundamental Courses			19-24												18		
Major Required Courses and Electives																	
CENG	1000	Note: CENG1000 OR CENG1500	3	3													
CENG	1500	Introduction to Chemical and Biological Engineering	3												3		
CENG	1600	Note: CENG1600 OR CENG1700 OR BIEN1010	3														
CENG	1700	Biotechnology and Its Business Opportunities	3		3										3		
CENG	1700	Introduction to Environmental Engineering	3														
BIEN	1010	Introduction to Biomedical Engineering	3														
CENG	1010	Academic and Professional Development I	0			0									0		
CENG	1980	Industrial Training	0										0		0		
CENG	2110	Process and Product Design Principles	3			3									3		
CENG	2210	Chemical and Biological Engineering Thermodynamics	3				3								3		
CENG	2220	Transport Phenomena I	3				3								3		
CENG	2310	Modeling for Chemical and Biological Engineering	3			3									3		
CENG	3110	Process Dynamics and Control	3							3					3		
CENG	3150	Integrated Chemical Process & Product Design	5							5					5		
CENG	3210	Separation Processes	3						3						3		
CENG	3220	Heat and Mass Transfer	3						3						3		
CENG	3230	Chemical and Biological Reaction Engineering	3						3						3		
CENG	3330	Data Science for Molecular Engineering	3			3									3		
CENG	3950	Chemical and Environment Engineering Laboratory	4									4			4		
CENG	4020	Academic and Professional Development II	0										0		0		
CENG	4920	Note: CENG 4920 OR CENG 4930 OR CENG 4940 (Students 6 taking the Research Option must take CENG 4930)	6										3	3	6		
CENG	4930	Chemical Engineering Capstone Design	6														
CENG	4940	Chemical Engineering Industrial Project	6														
ENGG	2010	Engineering Seminar Series	0			0	0	0	0	0					0		
CHEM	1050	Laboratory for General Chemistry I	1		1										1		
CHEM	2111	Fundamentals of Organic Chemistry	3				3								3		
CHEM	2155	Fundamental Organic Chemistry Laboratory	1				1								1		
LANG	4035	Technical Communication II for Chemical and Biological Engineering	3									3			3		
BIEN	2410	Note: BIEN2410 OR BIEN2610 OR LIFS1901	3														
BIEN	2610	Cellular and Systems Physiology for Engineers	3				3								3		
LIFS	1901	General Biology I	3														
CENG/CHEM		CENG Elective (9 credits from specified elective list)	9					3		3	3				9		
Required credits for Major Requirements Courses and Electives			68												68		
BBA in Management																	
School Requirements																	
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	3			3										3	
ECON	2113	Principles of Microeconomics	3														
ECON	2123	Note: ECON 2123 OR ECON 3123	3								3					3	
ECON	3123	Macroeconomics	3														
ECON	3123	Macroeconomic Theory I	3														
FINA	2303	Financial Management	3			3										3	
ISOM	2010	Introduction to Information Systems	3													0	Substituted by COMP 1021/1022P/2011/2012H
ISOM	2020	Coding for Business	1													0	Waived for DDP students if they have taken and passed COMP1021 or COMP 1029P
ISOM	2500	Business Statistics	3	3												3	
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 2110 is a major pre-requisite
MGMT	2130	Business Ethics and Social Responsibility	2											2		2	
LANG	2061	Note: LANG 2061 OR 2062 OR 3060	3											3			Non DDP-ECON students take ONLY a 3-credit of SBM-specific English course, in which they can choose from one of the three LANG courses (LANG 2061, LANG 2062, or LANG 3060).
LANG	2062	Professional Writing for the Workplace	3														
LANG	3060	Advanced Academic Writing	3														
MATH	1003	Note: MATH 1003 OR MATH 1012 OR MATH 1013 OR MATH 1020 OR MATH 1023	3-4														
MATH	1012	Calculus and Linear Algebra	3														
MATH	1013	Calculus IA	4														
MATH	1020	Accelerated Calculus	4														
MATH	1023	Honors Calculus I	3														
Required credits for School Requirements			45-46												35		
Major Requirements																	
Major Required Courses and Electives																	
MGMT	3110	Note: MGMT 3110 OR MGMT 3120 (For students in the Consulting Option, they will use MGMT 3110 to fulfill the Option Requirements and should take MGMT 3120 to fulfill this requirement.)	4						4							4	Students in the Consulting Option must take MGMT 3120
MGMT	3120	Human Resources Management	4														
MGMT	3130	Managerial Leadership	4														
MGMT	3140	Note: MGMT 3130 OR MGMT 3140 (Students in the Consulting Option must take MGMT 3140 to fulfill this requirement.)	4													4	Students in the Consulting Option must take MGMT 3140
MGMT	3140	Judgement and Decision Making in Organizations	4														
MGMT	3140	Negotiation	4														
MGMT	4210	Note: MGMT 4210 OR MGMT 4220 (Students in the Consulting Option or in the Corporate Social Responsibility and Sustainability Option must take MGMT 4210 to fulfill this requirement.)	3-4											3		3	Students in the Consulting Option must take MGMT 4210. Students in the CSR Option must take MGMT 4210.
MGMT	4220	Corporate Strategy	3														
MGMT	4220	Entrepreneurship and Innovation	4														
MGMT		MGMT 3000-level or above Electives (Any 3 courses of the subject and level as specified. Courses taken as Option Required Courses may not be counted towards the elective requirement.)	9										3	3	3	9	Students in the Consulting Option are recommended to take MGMT 4220 and a new course in Simulating Strategy to fulfill the major elective requirement.
Required credits for Major Required Courses and Electives			26-27												20		
Additional Requirements																	
Requirements for Dual Degree Program																	
Required Courses																	
TEMG	1010	T&M Professional Activities	0	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
Required credits for Additional Requirements			7													7	
University CORE																	
CORE	C3 - C9	U CORE - Others	21			3						6	6		6	21	
CORE	C1 & C2	U CORE - English Language	6	3	3											6	
HMAW	1905	Behavioral Foundations of University Education: Habits, Mindsets, and Wellness	3	1	2											3	
Sub-total for University CORE			30													30	
Term load (excl. free credits)																	