

<< 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 Global Business)			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	Introduction to Computer Science	3													
COMP	1022P	Introduction to Computing with Java	3	3												
COMP	2011	Programming with C++	4													
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5													
CHEM	1020	General Chemistry I	3	3												
LANG	2030	Technical Communication I	3													
		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													
MATH	1014	Calculus II	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							
PHYS	1112	Note: PHYS 1112 OR PHYS 1312	3													
PHYS	1312	General Physics I with Calculus	3													
PHYS	1312	Honors General Physics I	3													
Required credits for Engineering Fundamental Courses			19-24													
Major Required Courses and Electives																
CENG	1000	Note: CENG1000 OR CENG1500	3	3												
CENG	1500	Introduction to Chemical and Biological Engineering	3													
		A First Course on Materials Science and Applications	3													
CENG	1600	Note: CENG1600 OR CENG1700 OR BIEN1010	3													
CENG	1700	Biotechnology and Its Business Opportunities	3		3											
BIEN	1010	Introduction to Environmental Engineering	3													
BIEN	1010	Introduction to Biomedical Engineering	3													
CENG	1010	Academic and Professional Development I	0			0										
CENG	1980	Industrial Training	0										0			
CENG	2110	Process and Product Design Principles	3			3										
CENG	2210	Chemical and Biological Engineering Thermodynamics	3				3									
CENG	2220	Transport Phenomena I	3				3									
CENG	2310	Modeling for Chemical and Biological Engineering	3			3										
CENG	3110	Process Dynamics and Control	3						3							
CENG	3150	Integrated Chemical Process & Product Design	5						5							
CENG	3210	Separation Processes	3						3							
CENG	3220	Heat and Mass Transfer	3						3							
CENG	3230	Chemical and Biological Reaction Engineering	3						3							
CENG	3330	Data Science for Molecular Engineering	3			3										
CENG	3950	Chemical and Environmental Engineering Laboratory	4								4					
CENG	4020	Academic and Professional Development II	0									0				
		Note: CENG 4920 OR CENG 4930 OR CENG 4940 (Students taking the Research Option must take CENG 4930)	6									3	3			
CENG	4920	Chemical Engineering Capstone Design	6													
CENG	4930	Chemical Engineering Thesis Research	6													
CENG	4940	Chemical Engineering Industrial Project	6													
ENGG	2010	Engineering Seminar Series	0			0	0	0	0							
CHEM	1050	Laboratory for General Chemistry I	1		1											
CHEM	2111	Fundamentals of Organic Chemistry	3				3									
CHEM	2155	Fundamental Organic Chemistry Laboratory	1				1									
LANG	4035	Technical Communication II for Chemical and Biological Engineering	3									3				
		Note: BIEN2410 OR BIEN2610 OR LIFS1901	3													
BIEN	2410	Cellular and Systems Physiology for Engineers	3													
LIFS	2610	Chemical Biology for Engineers	3				3									
LIFS	1901	General Biology I	3													
CENG/CHEM		CENG Elective (9 credits from specified elective list)	9			3		3	3							
Required credits for Major Requirements Courses and Electives			68													
BBA in Global Business																
School Requirements																
ACCT	2010	Principles of Accounting I	3		3											
ACCT	2200	Principles of Accounting II	3						3							
ECON	2103	Note: ECON 2103 OR ECON 2113	3				3									
ECON	2113	Principles of Microeconomics	3													
ECON	2123	Note: ECON 2123 OR ECON 3123	3								3					
ECON	3123	Macroeconomics	3													
FINA	2303	Financial Management	3				3									
ISOM	2010	Introduction to Information Systems	3													
ISOM	2020	Coding for Business	1													
ISOM	2500	Business Statistics	3		3											
ISOM	2600	Introduction to Business Analytics	1						1							
ISOM	2700	Operations Management	3									3				
MARK	2120	Marketing Management	3				3									
MGMT	2010	Business Ethics and the Individual	2									2				
MGMT	2110	Organizational Behavior	3									3				
MGMT	2130	Business Ethics and Social Responsibility	2										2			
		Note: LANG 2061 OR 2062 OR 3060	3									3				
LANG	2061	Professional Writing for the Workplace	3													
LANG	2062	Professional Speaking for the Workplace	3													
LANG	3060	Advanced Academic Writing	3													
		Note: MATH 1003 OR MATH 1012 OR MATH 1013 OR MATH 1020 OR MATH 1023	3-4													
MATH	1003	Calculus and Linear Algebra	3													
MATH	1012	Calculus IA	4													
MATH	1013	Calculus IB	3													
MATH	1020	Accelerated Calculus	4													
MATH	1023	Honors Calculus I	3													
Required credits for School Requirements			45-46													
Major Requirements																
Major Required Courses and Electives																
GBUS	1000	Global Leadership Development	0						0	0	0	0	0	0	0	0
GBUS	2010	Global Business Analysis	3							3						
		Note: GBUS 2020 OR GBUS 2040	1													
GBUS	2020	Public Service Project	1							1	[1]					
GBUS	2040	Environmental, Social, and Governance (ESG) Corporate Project	1													
GBUS/ISOM		Note: GBUS 3030 OR ISOM 4780	3-4													
GBUS	3030	Global Business Case Studies	4								4	[3]				
ISOM	4780	Integrated Planning and Execution	3													
GBUS	4910	Capstone Project	4									4	[4]			
GBUS		Global Business Electives (Courses from the specified elective list, of which at least 6 credits from each area and at least 2 courses must be offered by GBUS. Courses taken to fulfill requirements of an additional major in SBM may not be counted towards this elective requirement.)	15									6	3	6		
Required credits for Major Required Courses and Electives			26-27													
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											
TEMG	4950	T&M Corporate Consulting Project	3-5								4					
Required credits for Additional Requirements			7													
University CORE																
CORE	C3 - C9	U CORE - Others	21			3		3			6	3		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)																
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):

>>