

<< 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 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 Chemical Engineering																		
Major Requirements																		
Engineering Fundamental Courses																		
COMP	1021	Note: COMP 1021 OR COMP 1022P OR COMP 2011 Introduction to Computer Science	3-4															
COMP	1022P	Introduction to Computing with Java	3	3											3			
COMP	2011	Programming with C++	4															
ENGG	1010	Academic Orientation	0	0	0										0			
CHEM	1010	Note: CHEM1010 OR CHEM1020 General Chemistry IA	3	3											3			
CHEM	1020	General Chemistry IB	3															
LANG	2030	Technical Communication I	3					3							3			
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			
PHYS	1112	Note: PHYS 1112 OR PHYS 1312 General Physics I with Calculus	3	3											3			
PHYS	1312	Honors General Physics I	3															
Required credits for Engineering Fundamental Courses			19-23											21				
Major Required Courses and Electives																		
CENG	1000	Note: CENG1000 OR CENG1500 Introduction to Chemical and Biological Engineering	3	3											3			
CENG	1500	A First Course on Materials Science and Applications	3															
CENG	1600	Note: CENG1600 OR CENG1700 OR BIEN1010 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	0	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	Process Fluid Mechanics	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	3950	Chemical and Environment Engineering Laboratory	4								4				4			
CENG	4020	Academic and Professional Development II	0									0			0			
CENG	4920	Note: CENG4920 OR CENG4930 OR CENG4940 Chemical Engineering Capstone Design	6										3	3	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						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 Cellular and Systems Physiology for Engineers	3												3			
BIEN	2610	Chemical Biology for Engineers	3															
LIFS	1901	General Biology I	3															
SENG/SSCI/ENVR		CENG Elective (12 credits from specified elective list)	12					3	3	3	3				12			
Required credits for Major Requirements Courses and Electives			68											68				
BBA in Marketing																		
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 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			
ISOM	2010	Introduction to Information Systems	3												0			
ISOM	2020	Coding for Business	1												1			
ISOM	2500	Business Statistics	3												3			
ISOM	2600	Introduction to Business Analytics	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			
MGMT	2130	Business Ethics and Social Responsibility	2											2	2			
SBMT	1111	Business Student Induction	0												0			
LABU	2040	Business Case Analyses	3									3			3			
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	3															
MATH	1013	Calculus IB	4															
MATH	1020	Accelerated Calculus	3															
MATH	1023	Honors Calculus I	4															
Required credits for School Requirements			45-46											39				
Major Requirements																		
Major Required Courses and Electives																		
MARK	3220	Marketing Research	4							4					4			
MARK	3420	Consumer Behavior	4								4				4			
MARK	4210	Strategic Marketing	4										4		4			
MARK		MARK 3000-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											24				
Additional Requirements																		
Requirements for Dual Degree Program																		
Required Courses																		
TEMG	1010	Technology and Management Professional Activities	0	0	0	0	0	0	0	0	0	0	0	0	0			
TEMG	3950	Case-based Problem Solving	3		3										3			
Required credits for Additional Requirements			3											3				
University CORE																		
CORE	C3 - C12	U CORE - Others	30					3			6	9	6	6	30			
CORE	C1 & C2	U CORE - English Language	6	3	3										6			
Sub-total for University CORE			36												36			
Term load (excl. free credits)																		
18 19 20 19 19 20 19 20 19 18																		
191##																		

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):