

<< 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)			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											
BEng in Chemical Engineering															
Major Requirements															
Engineering Fundamental Courses															
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										
COMP	2011	Programming with C++		4											
COMP	2012H	Honors Object-Oriented Programming and Data Structures		5											
CHEM	1012	General Chemistry B: Atomic Structure, Molecules, and Bonding Theories		3	3										
MATH	1012	Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR (MATH 1020)		4-7											
MATH	1013	Calculus IA		4											
MATH	1014	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						
PHYS	1112	Note: PHYS 1112 OR PHYS 1312 General Physics I with Calculus		3											
PHYS	1312	Honors General Physics I		3											
Required credits for Engineering Fundamental Courses				16-21											18
Major Required Courses and Electives															
CENG	1000	Note: CENG1000 OR CENG1500 Introduction to Chemical and Biological Engineering		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									
CENG	1700	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		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											
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 Environment Engineering Laboratory		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 Thesis Research		6											
ENGG	2010	Engineering Seminar Series		0			0	0	0	0					0
CHEM	1052	Laboratory for General Chemistry B		1			1								1
CHEM	2111	Fundamentals of Organic Chemistry		3				3							3
CHEM	2155	Fundamental Organic Chemistry Laboratory		1				1							1
BIEN	2410	Note: BIEN2410 OR BIEN2610 OR LIFS1901 Cellular and Systems Physiology for Engineers		3											
BIEN	2610	Chemical Biology for Engineers		3											
LIFS	1901	General Biology I		3				3							3
CENG/CHEM		CENG Elective (9 credits from specified elective list)		9				3		3	3				9
Required credits for Major Requirements Courses and Electives				65											65
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							3
ISOM	2010	Introduction to Information Systems		3											0
ISOM	2020	Coding for Business		1											0
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	2130	Business Ethics and Social Responsibility		2										2	2
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											
MATH	1013	Calculus IB		3											
MATH	1020	Accelerated Calculus		4											
MATH	1023	Honors Calculus I		3											
Required credits for School Requirements				39-40											32
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	T&M Professional Activities		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)															
					19	21	18	19	20	18	17	17	12	15	
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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):

>> The content of this example is not necessarily equivalent to a complete list of graduation requirements of the program. Students should refer to the Program Catalog/UG Curriculum Handbook for updated graduation requirements. For up-to-date information on course offering and scheduling, students should check it out from respective School and Department.