

<< 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 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		Sub-total	
Course Offering Dept. (course code prefix)	Course Code	Course Title / Courses List	Credits														
<b>BEng in Chemical Engineering</b>																	
<b>Major Requirements</b>																	
<b>Engineering Fundamental Courses</b>																	
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													
COMP	2012H	Programming with C++	4														
COMP	2012H	Honors Object-Oriented Programming and Data Structures	5														
ENGG	1010	Academic Orientation	0	0	0												
CHEM	1010	Note: CHEM1010 OR CHEM1020	3	3													
CHEM	1020	General Chemistry IA	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)	4-7														
MATH	1013	Calculus IA	4														
MATH	1013	Calculus IB	3														
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	3														
PHYS	1312	General Physics I with Calculus	3													3	
PHYS	1312	Honors General Physics I	3													3	
<b>Required credits for Engineering Fundamental Courses</b>				19-24												18	
<b>Major Required Courses and Electives</b>																	
CENG	1000	Note: CENG1000 OR CENG1500	3	3													
CENG	1500	Introduction to Chemical and Biological Engineering	3														
CENG	1500	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												
CENG	1010	Introduction to Environmental Engineering	3														
CENG	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	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													6	
CENG	4940	Chemical Engineering Thesis Research	6													6	
CENG	4940	Chemical Engineering Industrial Project	6													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	
BIEN	1901	Chemical Biology for Engineers	3													3	
LIFS	1901	General Biology I	3													3	
SENGSSCI/ENVR		CENG Elective (12 credits from specified elective list)	12							3	3	3	3			12	
<b>Required credits for Major Requirements Courses and Electives</b>				68												68	
<b>BBA in Economics</b>																	
<b>School Requirements</b>																	
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														3
ECON	2113	Microeconomics	3														3
ECON	2123	Note: ECON 2123 OR ECON 3123	3														3
ECON	3123	Macroeconomics	3														3
ECON	3123	Macroeconomic Theory I	3														3
FINA	2303	Financial Management	3														3
ISOM	2010	Introduction to Information Systems	3														0
ISOM	2020	Coding for Business	1														0
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
SBMT	1111	Business Student Induction	0														0
LABU	2040	Business Case Analyses	3														0
LABU	2060	Effective Communication in Business	3														3
MATH	1003	Note: MATH 1003 OR MATH 1012 OR MATH 1013 OR MATH 1020 OR MATH 1023	3-4														0
MATH	1012	Calculus and Linear Algebra	3														0
MATH	1013	Calculus IA	4														0
MATH	1013	Calculus IB	3														0
MATH	1020	Accelerated Calculus	4														0
MATH	1023	Honors Calculus I	3														0
<b>Required credits for School Requirements</b>				45-46													35
<b>Major Requirements</b>																	
<b>Major Required Courses and Electives</b>																	
ECON	3014	Managerial Microeconomics	4														4
ECON	3024	Managerial Macroeconomics	4														4
ECON	3334	Introduction to Econometrics	4														4
ECON	4670	Economics Research and Communication	0														0
ECON		ECON 4000-level Electives (Any 3 courses of the subject and level as specified)	11														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	0	0
TEMG	3950	T&M Case Analysis and Product Innovation	3														3
TEMG	4950	T&M Corporate Consulting Project	3-5														4
<b>Required credits for Additional Requirements</b>				7													7
<b>University CORE</b>																	
CORE	C3 - C12	U CORE - Others	30	3	3												30
CORE	C1 & C2	U CORE - English Language	6	3	3												6
<b>Sub-total for University CORE</b>				36													36
<b>Term load (excl. free credits)</b>																	
18 19 19 19 19 21 20 17 18 17																	
<b>187##</b>																	

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.