

<< 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 General Business 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	
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											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											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										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			16-21												18
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
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) 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	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				3								3
BIEN	2610	Chemical Biology for Engineers	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			65												65
BBA in General Business 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 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															
SB&M		SB&M Electives (Any 9 courses offered by the departments under SB&M, of which at least 4 courses are of 3000-level or above.)	29						3	4	4	6	6	6	29
Required credits for Major Required Courses and Electives			29												29
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
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 19 18 17 19 14 17															
181##															

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.