

<< 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	
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	3-5													
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	Calculus IA	4													
MATH	1013	Calculus IB	3	3	3											6
MATH	1014	Calculus II	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							3
PHYS	1112	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	Introduction to Chemical and Biological Engineering	3	3												3
CENG	1500	A First Course on Materials Science and Applications	3													
CENG	1600	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	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	Cellular and Systems Physiology for Engineers	3													
BIEN	2610	Chemical Biology for Engineers	3					3								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 Economics

School Requirements

ACCT	2010	Principles of Accounting I	3		3											3
ACCT	2200	Principles of Accounting II	3						3							3
ECON	2103	Principles of Microeconomics	3			3										3
ECON	2113	Microeconomics	3													
ECON	2123	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	Calculus and Linear Algebra	3-4													
MATH	1012	Calculus IA	4													
MATH	1013	Calculus IB	3		(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

ECON	3014	Managerial Microeconomics	4						4							4
ECON	3024	Managerial Macroeconomics	4							4						4
ECON	3334	Introduction to Econometrics	4								4					4
ECON		ECON 4000-level Electives (Any 3 courses of the subject and level as specified)	11									4	4	3		11
Required credits for Major Required Courses and Electives				23												23

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											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	14
175##									

<< Declaration of
BEng major

<< Declaration of
BBA major

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.