

**<< Declaration of major**

School: School of Engineering and School of Business Management		Student's Pathway												
Program: Dual Degree Program (BEng in Chemical Engineering and BBA in General Business Management)														
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 1022Q OR COMP 2011	3											
COMP	1022P	Introduction to Computer Science	3											
COMP	1022Q	Introduction to Computing with Java	3	3										3
COMP	2011	Introduction to Computing with Excel VBA Programming with C++	3											This course will also be used to substitute ISOM 2010
ENGG	1010	Academic Orientation	0	0	0									0
CHEM	1010	Note: CHEM1010 OR CHEM1020	3											3
CHEM	1020	General Chemistry IA	3	3										3
LANG	2030	Technical Communication I	3			3								3
MATH	1012	Note: MATH 1012 OR MATH 1024 OR MATH 1020	4											
MATH	1013	OR MATH 1024) OR (MATH 1020)	3											
MATH	1014	Calculus IA	3	3	3									6
MATH	1020	Calculus IB	3											
MATH	1023	Calculus II	4											
MATH	1024	Accelerated Calculus	3											
MATH	1024	Honors Calculus I	3											
MATH	2011	Honors Calculus II	3											
PHYS	1112	Introduction to Multivariable Calculus	3			3								3
PHYS	1312	Note: PHYS 1112 OR PHYS 1312	3											
PHYS	1312	General Physics I with Calculus	3	3										3
PHYS	1312	Honors General Physics I	3											
<b>Required credits for Engineering Fundamental Courses</b>			19-23											21

**Major Required Courses and Electives**

CENG	1000	Note: CENG1000 OR CENG1500	3	3										3
CENG	1500	Introduction to Chemical and Biological Engineering	3											
CENG	1600	A First Course on Materials Science and Applications	3											
CENG	1700	Note: CENG1700 OR CENG1700U	3											
BIEN	1010	Biotechnology and Its Business Opportunities	3		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	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	6									3		6
CENG	4930	Chemical Engineering Capstone Design	6									3	3	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
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 BIEN2410U OR CPYS1901	3											
BIEN	2610	Cellular and Systems Physiology for Engineers	3				3							3
LIFS	1901	Chemical Biology for Engineers	3											
LIFS	1901	General Biology I	3											
SENG/SCIE/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

**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	3			3								3
ECON	2113	Principles of Microeconomics	3											
ECON	2123	Note: ECON 2123 OR ECON 3123	3					3						3
ECON	3123	Macroeconomics	3											
FNA	2303	Macroeconomic Theory I	3			3								3
FNA	2303	Financial Management	3											
ISOM	2010	Introduction to Information Systems	3	---	---	---	---	---	---	---	---	---	---	0
ISOM	2020	Coding for Business	1						1					1
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
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: MATH1003 OR MATH1012 OR MATH1013 OR MATH1020 OR MATH1023	3-4											
MATH	1012	Calculus and Linear Algebra	3											
MATH	1013	Calculus IA	4											
MATH	1013	Calculus IB	3											
MATH	1020	Accelerated Calculus	4											
MATH	1023	Honors Calculus I	3											
<b>Required credits for School Requirements</b>			45-46											39

**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 2000-level or above.)	29							9		10	10	29
<b>Required credits for Major Required Courses and Electives</b>			29											29

**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
TEMG	3850	Case-based Problem Solving	2		2									2
<b>Required credits for Additional Requirements</b>			2											2

**University CORE**

CORE	C3 - C12	U CORE - Others	30		6		3				12	3	6	30
CORE	C1 & C2	U CORE - English Language	6	3	3									6
<b>Sub-total for University CORE</b>			36											36

Term load (excl. free credits)

18	18	20	19	21	22	20	19	19	19
195##									

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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.