

<< Declaration of BEng major << Declaration of BBA major

School:		School of Engineering and School of Business Management			Student's Pathway										
Program:		Dual Degree Program (BEng in Bioengineering and BBA in 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	Remarks

BEng in Bioengineering

Major Requirements

Engineering Fundamental Courses

COMP 1021	1021	Introduction to Computer Science	3-6													Students should take COMP1021 which will also be used to substitute ISOM 2010 and to waive ISOM 2020
COMP 1022P	1022P	Introduction to Computing with Java	3		3											
COMP 1029P	1029P	Python Programming Bridging Course	1													
COMP 2011	2011	Programming with C++	4													
COMP 2012H	2012H	Honors Object-Oriented Programming and Data Structures	5													
CHEM 1012	1012	General Chemistry B: Atomic Structure, Molecules, and Bonding Theories	3	3												
CHEM 1052	1052	Laboratory for General Chemistry B	1	1												
LIFS 1901	1901	General Biology I	3	3												
		Note: [(MATH 1012 OR MATH 1013 OR MATH 1023) AND (MATH 1014 OR MATH 1024)] OR [MATH 1020]	4-7													
MATH 1012	1012	Calculus IA	4													
MATH 1013	1013	Calculus IB	3	3	3											
MATH 1014	1014	Calculus II	3													
MATH 1020	1020	Accelerated Calculus	4													
MATH 1023	1023	Honors Calculus I	4													
MATH 1024	1024	Honors Calculus II	3													
PHYS 1112	1112	General Physics I with Calculus	3			3										
PHYS 1312	1312	Honors General Physics I	3													
SENG		Engineering Introduction course (if the students take an introduction course included in their major, this course can be counted towards their major requirement.)	3-4		(3)											
Required credits for Engineering Fundamental Courses			20-27												19	

Major Required Courses and Electives

BIEN 1010	1010	Introduction to Biomedical Engineering	3		3											
CENG 1000	1000	Introduction to Chemical and Biological Engineering	3													
BIEN 2310	2310	Modeling for Chemical and Biological Engineering	3			3										
BIEN 2410	2410	Cellular and Systems Physiology for Engineers	3						3							
BIEN 2610	2610	Chemical Biology for Engineers	3			3										
BIEN 2990	2990	Academic and Professional Development I	1			1										
BIEN 3300	3300	Data Science for Molecular Engineering	3					3								
BIEN 3310	3310	Data Science for Neural Engineering	3				3									
BIEN 3320	3320	Data Science for Biology and Medicine	3													
BIEN 3410	3410	Introduction to Bioinstrumentation and Biomedicine	3							3						
BIEN 3910	3910	Bioengineering Laboratory	4							4						
BIEN 4920	4920	Bioengineering Capstone Design	6									3	3			
BIEN 4930	4930	Bioengineering Thesis Research	6													
BIEN 4940	4940	Bioengineering Industrial Project	6													
BIEN 4990	4990	Academic and Professional Development II	1										1			
CENG 2210	2210	Chemical and Biological Engineering Thermodynamics	3				3									
CENG 2220	2220	Transport Phenomena I	3									3				
CENG 3230	3230	Chemical and Biological Reaction Engineering	3							3						
ENGG 2010	2010	Engineering Seminar Series	0			0	0	0	0							
SSCI/SENG		Bioengineering Electives (5 courses from the specified elective list, of which at least 9 credits should be taken from a single specialty area (Area 1 or Area 2). Out of the 15 credits taken, at least 9 credits should be at 4000-level)	15								3		6		6	
Required credits for Major Required Courses and Electives			57												57	

BBA in Management

School Requirements

ACCT 2010	2010	Principles of Accounting I	3	3												
ACCT 2200	2200	Principles of Accounting II	3						3							
ECON 2103	2103	Principles of Microeconomics	3			3										
ECON 2113	2113	Microeconomics	3													
ECON 2123	2123	Macroeconomics	3							3						
ECON 3123	3123	Macroeconomic Theory I	3													
FINA 2303	2303	Financial Management	3				3									
ISOM 2010	2010	Introduction to Information Systems	3													Substituted by COMP 1021/1022P/2011/2012H
ISOM 2020	2020	Coding for Business	1													Waived for DDP students if they have taken and passed COMP1021 or COMP 1029P
ISOM 2500	2500	Business Statistics	3			3										
ISOM 2600	2600	Introduction to Business Analytics	1													Substituted by BIEN 3310/3320
ISOM 2700	2700	Operations Management	3					3								
MARK 2120	2120	Marketing Management	3				3									
MGMT 2010	2010	Business Ethics and the Individual	2									2				
MGMT 2110	2110	Organizational Behavior	3				3									MGMT 2110 is a major pre-requisite
MGMT 2130	2130	Business Ethics and Social Responsibility	2										2			
MATH 1003	1003	Calculus and Linear Algebra	3-4													DDP students should take MATH 1013 OR MATH 1023 to satisfy the requirements of both BSc and BBA degrees
MATH 1012	1012	Calculus IA	4													
MATH 1013	1013	Calculus IB	3													
MATH 1020	1020	Accelerated Calculus	4													
MATH 1023	1023	Honors Calculus I	3													
Required credits for School Requirements			39-40													31

Major Requirements

Major Required Courses and Electives

MGMT 3110	3110	Human Resources Management	4					4									Students in the Consulting Option must take MGMT 3120
MGMT 3120	3120	Managerial Leadership	4														
MGMT 3130	3130	Judgement and Decision Making in Organizations	4						4								Students in the Consulting Option must take MGMT 3140
MGMT 3140	3140	Negotiation	4														
MGMT 4210	4210	Corporate Strategy	3-4							3							Students in the Consulting Option must take MGMT 4210
MGMT 4220	4220	Entrepreneurship and Innovation	4														
MGMT		MGMT 3000-level or above Electives (Any 3 courses of the subject and level as specified. Courses taken as Option Required Courses may not be counted towards the elective requirement.)	9								3	3	3				Students in the Consulting Option are recommended to take MGMT 4220 and a new course in Simulating Strategy to fulfill the major elective requirement
Required credits for Major Required Courses and Electives			20-21													20	

Additional Requirements

Requirements for Dual Degree Program

Required Courses

TEMG 1010	1010	T&M Professional Activities	0	0	0	0	0	0	0	0	0	0	0	0	0	
TEMG 3950	3950	T&M Case Analysis and Product Innovation	3		3											
TEMG 4950	4950	T&M Corporate Consulting Project	3-5					4								
Required credits for Additional Requirements			7													7

University CORE

CORE C3 - C9	C3 - C9	U CORE - Others	21			3	3	3	3			6	3			21
CORE C1 & C2	C1 & C2	U CORE - English Language	6	3	3											6
HMAW 1905	1905	Behavioral Foundations of University Education: Habits, Mindsets, and Wellness	3	1	2											3
Sub-total for University CORE			36													30

Term load (excl. free credits)

17	20	16	18	17	16	16	17	12	15
164##									

Notes:

() indicates the reuse of the same course to fulfill more than one requirement.

--- denotes the course/requirement is either waived or substituted

To graduate, students should complete all requirements specified for DDP.

**Remarks on course(s):