

DEPARTMENT OF CHEMICAL AND BIOLOGICAL ENGINEERING
and
SCHOOL OF MANAGEMENT
University at Buffalo

**JOINT FIVE-YEAR PROGRAM
BS (Chemical Engineering)/MBA**

The Department of Chemical and Biological Engineering and the School of Management offer a five-year program leading to a joint Bachelors degree in chemical engineering and Masters degree in business administration. This program reduces by one year the usual pattern of a four-year undergraduate degree and a two-year MBA program. At completion, you will be awarded a BS diploma and an MBA diploma, with a transcript notation that these degrees were awarded as part of a combined degree program.

Students wishing to pursue the dual program should take the GMAT and apply to the MBA program early during their junior year. Admissions will be limited to students who can satisfy the entrance requirements for the MBA program.

Each candidate must meet all the degree requirements of each program, except for the reduction in the total credit hours required for the usual pattern of a four-year BS (chemical engineering) degree and a two-year MBA degree.

Applications for the joint five-year program can be found on the web at www.mgt.buffalo.edu. For additional information or to set up an appointment, please contact:

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Assistant Director of Admissions
School of Management
203 Alfiero Center
(716) 645-7853
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BS/MBA CHEMICAL ENGINEERING

Course Guide for students starting MBA classes Fall 2013 or later
(New CE requirements for CE students entering JR year on or after Fall 2012)

First Year

Fall Semester	Credit Hrs	Spring Semester	Credit Hrs.
MTH 141 Calculus I	4	MTH 142 Calculus II	4
CHE 107 Chemistry I ^	4	PHY 107 Physics I	4
EAS 140 Engineering Principles	3	CHE 108 Chemistry II ^	4
ENG 101 or 102 Writing **	3	EAS 230 Engineering Computations	3
General Education %	3	EAS 202 Engineering Impact on Society ^	1
Total Credits		Total Credits	
17		16	

Library Skills *

Second Year

MTH 241 Calculus III	4	MTH 306 Differ. Equations	4
PHY 108 Physics II	4	CHE 204 Organic Chemistry II or BIO 205	3
PHY 158 Physics II Lab	1	BIO 201 Cell Biology	4
CHE 201 Organic Chemistry I	5	CE 304 CE Thermodynamics	4
CE 212 Fundamental Principles of CE	3	ENG 201 Adv. Writing or Humanities **	3
Total Credits		Total Credits	
17		18	

Third Year

CHE 334 Phys. Chem. II	3	CE 433 Materials Science & Engineering	3
CE 329 Chemical Reaction Engineering	3	CE 318 Transport Processes II	4
CE 317 Transport Processes I	4	CE 328 Chem. Engr. Lab II	2
CE 327 Chem. Engr. Lab I	2	CE 407 Separations	3
CE 341 Applied CE Math	3	General Education %	3
Total Credits		Total Credits	
15		18	

MBA applications are due by May 1 of third year

Summer

2 General Education Classes %

Fourth Year

First Semester MBA Core @	15	Second Semester MBA Core @	10
CE 434 Chemical Systems & Control	3	CE Technical Elective ***	3
Total Credits		Total Credits	
18		16	

MBA Electives - may include internship @	12	Fourth Semester MBA Core @	2
CE 404 CE Product Design	4	MBA Electives @	9
CE 427 Che. Engr. Lab III	2	CE 408 Chem. Engr. Plant Design	4
Total Credits		Total Credits	
18		17	

- Pr. Indicates a prerequisite for the course. Not all prerequisites are noted.
- * Library Skills Test is required for all students entering UB in Fall of 1997 and thereafter. See the Library Skills website at <http://ublib.buffalo.edu/libraries/units/ugl> or go to room 107 in UGL.
- ** ENG 101 and ENG 201 or ENG 102 and Humanities (Writing Skills Requirement) as determined by placement: SAT/ACT, AP, TOEFL, or transfer credit. SAT verbal 400-570 = ENG 101 and then 201, 580-720 = ENG 102 and Humanities (%), 730-800 = Exempt from Writing Skills but need Humanities (%).
- *** Please see department manual or website for details on CE technical electives and general technical electives. The 200+ technical elective requirement for the standard BS in chemical engineering is not required when students complete this combined degree.
- ^ CHE 101-102 OR CHE 105-106 may be substituted for CHE 107-108.
- ^^ EAS 202 Engineering Impact on Society is required for students entering UB Engineering as freshman beginning with the fall 2011 catalog year.
- % World Civilizations I and II, American Pluralism or approved cognate, Social & Behavioral Science, Arts, and Humanities (if not required to complete ENG 101-201 sequence).
- @ Contact the School of Management for advisement on core MBA requirements and electives

BS/MBA CHEMICAL ENGINEERING

Course Guide for students starting MBA classes Fall 2012
(old CE requirements)

First Year

Fall Semester	Credit Hrs	Spring Semester	Credit Hrs.
MTH 141 Calculus I	4	MTH 142 Calculus II	4
CHE 107 Chemistry I ^	4	PHY 107 Physics I	4
EAS 140 Engineering Principles	3	CHE 108 Chemistry II ^	4
ENG 101 or 102 Writing **	3	EAS 230 Engineering Computations	3
General Education %	3	EAS 202 Engineering Impact on Society ^	1
Total Credits	17	Total Credits	16

Library Skills *

Second Year

MTH 241 Calculus III	4	MTH 306 Differ. Equations	4
PHY 108 Physics II	4	CHE 204 Organic Chemistry II or BIO 205	3
PHY 158 Physics II Lab	1	BIO 201 Cell Biology	4
CHE 201 Organic Chemistry I	5	CE 304 CE Thermodynamics	4
CE 212 Fundamental Principles of CE	3	ENG 201 Adv. Writing or Humanities **	3
Total Credits	17	Total Credits	18

Third Year

CHE 334 Phys. Chem. II	3	CE 433 Materials Science & Engineering	3
CE 329 Chemical Reaction Engineering	3	CE 318 Transport Processes II	4
CE 317 Transport Processes I	4	CE 328 Chem. Engr. Lab II	2
CE 327 Chem. Engr. Lab I	2	CE 407 Separations	3
General Education %	3	Technical Elective (200 level)	3
Total Credits	15	General Education %	3
		Total Credits	18

MBA applications are due by May 1 of third year

Summer

2 General Education Classes %

Fourth Year

First Semester MBA Core @	15	Second Semester MBA Core @	10
CE 434 Chemical Systems & Control	3	CE Technical Elective ***	3
Total Credits	18	CE Technical Elective ***	3
		Total Credits	16

MBA Electives - may include internship @	12	Fourth Semester MBA Core @	2
CE 404 CE Product Design	4	MBA Electives @	9
CE 427 Che. Engr. Lab III	2	CE 408 Chem. Engr. Plant Design	4
Total Credits	18	CE 428 Chem Engr. Lab IV	2
		Total Credits	17

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- *** Please see department manual or website for details on CE technical electives and general technical electives. The 300/400 level technical elective requirement for the standard BS in chemical engineering is not required as part of this combined degree.
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BS/MBA CHEMICAL ENGINEERING

Course Guide for students starting MBA classes prior to Fall 2012

First Year

Fall Semester	Credit Hrs	Spring Semester	Credit Hrs.
MTH 141 Calculus I	4	MTH 142 Calculus II	4
CHE 107 Chemistry I ^	4	PHY 107 Physics I	4
EAS 140 Engineering Principles	3	CHE 108 Chemistry II ^	4
ENG 101 or 102 Writing **	3	EAS 230 Engineering Computations	3
General Education %	3	EAS 202 Engineering Impact on Society ^	1
Total Credits		Total Credits	
17		16	

Library Skills *

Second Year

MTH 241 Calculus III	4	MTH 306 Differ. Equations	4
PHY 108 Physics II	4	CHE 204 Organic Chemistry II or BIO 205	3
PHY 158 Physics II Lab	1	BIO 201 Cell Biology	4
CHE 201 Organic Chemistry I	5	CE 304 CE Thermodynamics	4
CE 212 Fundamental Principles of CE	3	ENG 201 Adv. Writing or Humanities **	3
Total Credits		Total Credits	
17		18	

Third Year

CHE 334 Phys. Chem. II	3	CE 433 Materials Science & Engineering	3
CE 329 Chemical Reaction Engineering	3	CE 318 Transport Processes II	4
CE 317 Transport Processes I	4	CE 328 Chem. Engr. Lab II	2
CE 327 Chem. Engr. Lab I	2	CE 407 Separations	3
General Education %	3	Technical Elective (200 level)	3
Total Credits		Total Credits	
15		18	

MBA applications are due by May 1 of third year

Summer

2 General Education Classes %

Fourth Year

MGA 604 Financial Analysis & Reporting	3	MGO 641 Strategic Management	3
MGB 601 Behav & Organiz Concepts	3	MGM 625 Marketing Management	3
MGQ 606 Probability & Statistics or CIE 308	3	MGO 630 Operations & Service Mgt	3
MGT 601 Ethics & Corporate Governance	1.5	MGF 631 Financial Management	1.5
MGF 631 Financial Management	1.5	MGG 635 Business Communications	1.5
CE 434 Chemical Systems & Control	3	CE Technical Elective	3
CE Technical Elective ***	3	Total Credits	
Total Credits		15	
18			

Summer

MBA Practicum (May be taken during a regular semester but not recommended due to course loads.)

Fifth Year

MGE 601 Economics for Managers	3	MGA 609 Management Accounting	3
MBA Elective @	3	MBA Elective @	3
MBA Elective @	3	MBA Elective @	3
MBA Elective @	3	MBA Elective @	3
CE 404 CE Product Design	4	CE 408 Chem. Engr. Plant Design	4
CE 427 Che. Engr. Lab III	2	CE 428 Chem Engr. Lab IV	2
Total Credits		Total Credits	
18		18	

- Pr. Indicates a prerequisite for the course. Not all prerequisites are noted.
- * Library Skills Test is required for all students entering UB in Fall of 1997 and thereafter. See the Library Skills website at <http://ublib.buffalo.edu/libraries/units/ugl> or go to room 107 in UGL.
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- @ Contact the School of Management for advisement on MBA electives.