



Curricular Plan Industrial Engineering BS/MBA

The plan below provides a roadmap for completing this academic program and the UB Curriculum within x years. Your actual plan may vary depending on point of entry to the university, course placement and/or waivers based on standardized test scores, earned alternative credit and/or college transfer credit.

All students are encouraged to use this plan in conjunction with other academic planning resources such as your academic advisor, the hUB Academic Advisement Report, My Planner and Path Finder tool.

In addition to following this course roadmap, all other admission and academic requirements of this major (as per the Undergraduate Catalog) must be met in order to successfully complete this degree.

First Year – Fall Semester		
Course	Category	Credit
UB Seminar	UBS	3
EAS 140 Engineering Principles	M	3
MTH 141 College Calculus I	M	4
CHE 107 General Chemistry for Engineers	M	4
General Education	CL1	4
General Education	TP1	3
<i>Total Credits:</i>		21

First Year – Spring Semester		
Course	Category	Credit
EAS 202 Engineering Impact On Society	M	1
MTH 142 College Calculus 2	M	4
CHE 108/PHY 207/257/BIO200/201	M	4
PHY 107 General Physics I	M	4
General Education	TP2	3
<i>Total Credits:</i>		16

Second Year – Fall Semester		
Course	Category	Credit
MTH 241 College Calculus 3	M	4
PHY 108 General Physics II	M	4
EAS 207 Statics	M	3
General Education	GP1	3

Second Year – Spring Semester		
Course	Category	Credit
MTH 306 Introduction to Differential Equations	M	4
EAS Elective	E	3
IE 320 Engineering Economy	M	3
EAS 230 Engineering Computations or EAS 240 Introduction to Programming for Engineers	M	3

<i>Total Credits:</i> 14	

General Education	GP2	3
<i>Total Credits:</i> 16		

Third Year – Fall Semester		
Course	Category	Credit
IE 322 Analytics and Computing for Industrial Engineers	M	3
EAS 305 Applied Probability	M	4
IE 326 Planning for Production and Service Enterprises	M	3
IE 373 Systems Modeling and Optimization: OR I	M	4
<i>Total Credits:</i>		14

Third Year – Spring Semester		
Course	Category	Credit
IE 306 Statistics for Engineers	M	4
IE 323 Human Factors in Systems Design	M	4
IE 327 Facilities Design and Materials Handling	GP3	3
E 374 Systems Modeling and Optimization: OR II	M	4
EAS 360 STEM Communications	M	3
<i>Total Credits:</i>		18

Fourth Year – Fall Semester		
Course	Category	Credit
IE 477 Digital Simulation Modeling and Analysis	M	4
MGB 610LEC Organizational Behavior	M	2
MGQ 608LEC Statistical Analysis for Managers	M	2
MGA 603LEC Financial Accounting for Managers	M	2
MGO 695 Special Topics in Ops	M	1.5
MGF 611LEC Financial Analysis for Managers	M	2
MGB 611LEC Team Skills	M	1
MGQ 609LEC Analytics for Managers	M	1

Fourth Year – Spring Semester		
Course	Category	Credit
MGO 640LEC Business Strategy	M	2
MGO 620LEC Operations Management	M	2
MGS 605LEC Information Technology for Managers	M	2
MGE 604LEC Business Economics	M	2
MGA 605LEC Accounting for Management Decision Making	M	2
E 408 Quality Assurance	M	3
IE Technical Elective	E	3
General Education	CAP	1

MGG 635LEC Management Communications	M	1.5
MGM 615LEC Marketing for Managers	M	2
<i>Total Credits:</i>		19

<i>Total Credits:</i>		17

Fifth Year – Fall Semester		
<i>Course</i>	<i>Category</i>	<i>Credit</i>
MBA Elective	E	3
MBA Elective	E	3
MBA Elective	E	3
MBA Elective	E	3
IE 420 Systems Engineering Practicum	M	3
IE Technical Elective	E	3
<i>Total Credits:</i>		18

Fifth Year – Spring Semester		
<i>Course</i>	<i>Category</i>	<i>Credit</i>
MGO 642LEC Capstone: Integration of Business Functions	M	1
MGO 644LEC Business Practice	M	1
MBA Elective	E	3
MBA Elective	E	3
MBA Elective	E	3
IE 496 Senior Capstone Internship (TUT)	CAP	2
IE 496 Senior Capstone Internship (LEC)	CAP	1
<i>Total Credits:</i>		14

Total Credits Required for Degree:	167
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Category Legend:
CAP - UB Capstone
CL1/CL 2 - Communication Literacy 1/2
DL - Diversity Learning
E - Elective (not required for major or UB Curriculum)
GP1/GP2/GP3 - Global Pathway Course 1/2/3
M - Major requirement (including pre-requisites needed for admission to the major)
MQR - Math and Quantitative Reasoning
SLI1/SLI2 - Scientific Literacy and Inquiry 1/2
TP1/TP2/TP3 - Thematic Pathway Course 1/2/3
UBS - UB Seminar

