

# Industrial Engineering

## Elective Focus Area (EFA)

### Management

Industrial Engineers are often tasked with managerial tasks, project management, and financial assessments, as they relate to project budgets, cost calculations, and optimization criteria. The Management EFA prepares students for a career in business management. **Students following the Management EFA are required to complete all requirements for the Minor in Business Administration.** Information on the Business Administration Minor can be found at <http://www.biz.uiowa.edu/upo/programs/minor.html>. The following table explains the requirements for a Business Minor, and how they can be satisfied by undergraduate students in the Industrial Engineering (IE) program. It can be seen that four courses for the Business Minor can be satisfied by courses that are required in the IE curriculum. Another one, 6E:001 or 6E:002, which can be taken as part of the General Education Component (GEC), and five courses should be taken as part of the 21 semester hours of classes reserved for the EFA. This leaves one course, 6E:001 or 6E:002, which cannot be completed within the GEC requirement, as it is currently stated.

Required Courses for Business Minor	SH	Equivalent Courses for IE Majors	SH
22M:017 Calculus & Matrix Algebra for Business	4	22M:031 Engineering Mathematics I	4
22S:008 Statistics for Business	3-4	22S:039 Probab. & Statistics for Engrs.	3
6E:001 Principles of Microeconomics	4	<i>Take as part of GEC</i>	4
6E:002 Principles of Macroeconomics	4	<i>Additional course</i>	4
6A:001 Introduction to Financial Accounting	3	<i>Take as part of EFA</i>	3
6A:002 Managerial Accounting	3	<i>Take as part of EFA</i>	3
6J:047 Introduction to Law	3	<i>Take as part of EFA</i>	3
6J:048 Introduction to Management	3	<i>Take as part of EFA</i>	3
6K:070 Computer Analysis	3	59:006 Engineering Problem Solving II	3
6M:100 Introduction to Marketing	3	<i>Take as part of EFA</i>	3
6F:100 Introductory Financial Management	3	56:054 Engineering Economy	3
<b>Total hours required:</b>	<b>36-7</b>		<b>36</b>

An EFA schedule accommodating the Business Minor could thus be designed as shown in the following table. **This schedule assumes that 6E:001 or 6E:002 is taken as part of the GEC.** The Math/Science Elective is required for any EFA and suitable courses are listed in the last table. The 100-level **engineering** course in Semester 8 allows students to gain advanced knowledge in an engineering topic of their choice.

Semester	Course	Session	SH	Pre-/Co-Requisites
4 (Spring)	6A:001 Introduction to Financial Accounting	All	3	Sophomore standing
5 (Fall)	6A:002 Managerial Accounting	All	3	6A:001, 6E:001, 22M:031
7 (Fall)	6J:047 Introduction to Law	All	3	Sophomore standing
8 (Spring)	6J:048 Introduction to Management	All	3	Sophomore standing
8 (Spring)	6M:100 Introduction to Marketing	All	3	6E:001, Junior standing
8 (Spring)	Math/Science Elective		3	
8 (Spring)	100-level Engineering course		3	

Math and Science Elective Courses	SH	Pre-/Co-Requisites
29:030 Physics IV	3	22M:026 or 22M:032 or 22M:036 or 22M:046, and 029:029
4:012 Principles of Chemistry II	4	4:011
22S:150 Regression, Time Series, & Forecasting	3	22S:120 or 22S:131 or 22S:154
22S:152 Applied Linear Regression	3	22S:030 or 22S:039 or 22S:043 or 22S:120 or equivalent
22M:072 Elementary Numerical Analysis	3	22M:026 or 22M:036
22M:037 Engineering Mathematics V	3	
2:010 Principles of Biology I	4	4:011

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