# Industrial and Systems Engineering — ABM

**Accelerated Bachelor's/Master's Curriculum for the Department of Industrial and Systems Engineering**

The Department of Industrial and Systems Engineering Accelerated Bachelor's/Master's (ABM) program provides an opportunity for highly motivated undergraduate students to gain a depth of understanding and experience of industrial and systems engineering beyond that of typical bachelor's level graduates.

The Bachelor of Industrial and Systems Engineering or the Business Engineering Technology Minor can lead to a Master of Science in Industrial and Systems Engineering or a Master of Engineering Management in the ABM program. Below is an example curriculum for a student in the Bachelor of Industrial and Systems Engineering pursuing the Master of Science in Industrial and Systems Engineering.

**Junior and Senior Year for Students in ABM Program - Industrial and Systems Engineering**

Approved graduate level INSY electives can be taken in the ABM program to replace INSY electives or TECH electives at the undergraduate level for students pursuing the Bachelor of Industrial and Systems Engineering. Courses marked with an asterisk are those that can be substituted with graduate level courses by students enrolled in the ABM program to meet nine undergraduate hours during their junior and senior year and nine graduate hours to be used toward their graduate degree.

**Junior**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Core Social Science | | Core Literature | 3 |
| **INSY 3010 ISE Prog and Database Apps** | **3** | *TECH Elective | 3 |
| **INSY 3400 Stochastic Operations Research** | **3** | **INSY 3420 Simulation** | **3** |
| **INSY 3410 Deterministic Ops Research** | **3** | **INSY 3700 Operations Planning Control** | **3** |
| **INSY 3600 Engineering Economy** | **3** | **INSY 3800 Manufacturing Systems I** | **3** |

**Senior**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| Select one of the following: | 3 | Core Social Science | 3 |
| PHIL 1020 Introduction To Ethics | | **INSY 4800 Senior Design** | **3** |
| PHIL 1030 Ethics And The Health Sciences | | ***INSY Elective** | **3** |
| PHIL 1040 Business Ethics | | *TECH Elective | 3 |
| ELEC 3810 Fund Of Electrical Engr | 3 | UNIV 4AA0 Achieve the Creed | 0 |
| **INSY 4330 Stat Quality Design And Ctrl** | **3** | | |
| **INSY 4500 Professional Practice** | **1** | | |
| **INSY 4700 Manufacturing Systems II** | **3** | | |
| ***INSY Elective** | **3** | | |

**Accelerated Master of Industrial and Systems Engineering**

**Fifth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| INSY 7300 Adv Engineering Statistics I | 3 | INSY 6600 Engineering Econ Sys | 3 |
| INSY 6000-8999 | 6-12 | INSY 7420 Linear Prog And Network Flows | 3 |
| | | INSY 7950 Seminar | 1 |

| | | |
|---|---|---|
| | INSY 6000-8999 | 6-12 |
| | **9** | **13** |

**Total Hours: 22**