

Accelerated Undergraduate-Graduate Programs

Industrial Engineering - Accelerated Undergraduate-Graduate Program (B.S.I.E. / M.S.I.E.)

College of Engineering and Computer Science
Department of Industrial Engineering and Management Systems, Engineering II, Room: 312

<http://www.iems.ucf.edu/>

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Admission Requirements

- See Common Program Prerequisites
- Qualified students may apply after completion of a minimum of 60 credit hours
- Admission to the Accelerated Program does not guarantee formal admission to the MSIE program.
- Admission is not automatic. Interested students may need to be interviewed

Degree Requirements

- None
- 1. UCF General Education Program (GEP) (38 hrs)**
- See Industrial Engineering major in the Catalog for track specific GEP requirements.

- A: Communication Foundations (9 hrs)**
- B: Cultural & Historical Foundations (9 hrs)**
- C: Mathematical Foundations (7 hrs)**
- D: Social Foundations (6 hrs)**
- E: Science Foundations (7 hrs)**

- 2. Common Program Prerequisites (CPP) (19 hrs)**
- See Industrial Engineering major in the Catalog for the CPP requirements.
- See "Common Prerequisites" in the Transfer and Transitions section for more information.

- 3. Core Requirements: Basic Level (60 hrs)**
- Industrial Engineering Core: Basic 2 hrs**

■ The College of Engineering and Computer Science requires all engineering students to achieve a minimum 2.250 GPA in completing the core courses required for the major, together with the restricted electives and senior design courses listed below.

EGS 1006C	Introduction to the Engineering Profession	1 hr
EGN 1007C	Engineering Concepts and Methods	1 hr

- 4. Core Requirements: Advanced Level (60 hrs)**
- Graduate courses used to complete the Accelerated BS to MS will be chosen in consultation with the graduate advisor. The courses listed in this example are relevant to the Engineering Management MS. A "C" (2.0) or better is required in all courses listed in this section with a prefix of EIN, ESI, STA and MAS. A "B" (3.0) or better is required for 5000/6000 level courses to be transferred for graduate credit.

EIN 2002	Introduction to Industrial Engineering and Management Systems	1 hr
¹ COP 3223C	Introduction to Programming with C	3 hrs
EGN 3310	Engineering Analysis-Statics	3 hrs
EGN 3321	Engineering Analysis-Dynamics	3 hrs
EGN 3373	Principles of Electrical Engineering	3 hrs
EGS 4624	Engineering Innovation and Leadership	3 hrs
STA 3032	Probability and Statistics for Engineers	GEP
MAS 3105	Matrix and Linear Algebra	4 hrs
EIN 3351	Engineering Economic Analysis and Cost Engineering	3 hrs
ESI 4221	Empirical Methods for Industrial Engineering	3 hrs
ESI 4234	Quality Engineering	3 hrs
EIN 4243C	Human Engineering	3 hrs
EIN 4333	Production and Distribution Systems	3 hrs
EIN 4360	Facilities Planning and Work Design	4 hrs
EIN 4391	Manufacturing Engineering	3 hrs
EIN 4517	Systems Engineering	3 hrs

ESI 4628	Decision Support Systems for Industrial Engineers	3 hrs
ESI 4312	Deterministic Methods for Operations Research	3 hrs
ESI 4313	Stochastic Methods for Operations Research	3 hrs
ESI 4523	Systems Simulation	3 hrs
EGN 3343	Thermodynamics	3 hrs

¹ Courses with significant programming content in C, C++ or Java may be used to satisfy this requirement but must be approved by the IEMS undergraduate coordinator.

5. Restricted Electives (5 hrs)

■ Three (3) hours of technical electives must be either EIN 5140 Project Engineering or ESI 5219 Engineering Statistics which are required core requirements in the MSIE program. Another three (3) hours of technical elective may be taken at the 5000 level as a substitute for any of the 3 courses specified in the core requirements for the BSIE. Students should consult with their assigned academic advisor for a list of the approved technical electives and the terms when specific courses of this type are to be offered.

6. Capstone Requirements

- None

7. Foreign Language Requirements

Admissions

■ Two years of one foreign language in high school, or one year of one foreign language in college (or equivalent proficiency exam) prior to graduation.

Graduation

- None

8. Electives

- None

9. Additional Requirements

- None

10. Required Minors

- None

11. Departmental Exit Requirements (4 hrs)

EIN 4891C	Industrial Engineering Senior Design Project	4 hrs
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12. University Minimum Exit Requirements

- A 2.0 UCF GPA
- 60 semester hours earned after CLEP awarded
- 48 semester hours of upper division credit completed
- 30 of the last 39 hours of course work must be completed in residency at UCF.
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted.
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit.

Total Undergraduate Hours Required

- 128

Total Combined Hours Required

- 146

Honors In Major

- None

Related Programs

- None

Certificates

- None

Related Minors

- None

Advising Notes

■ After entry to the Accelerated Program students will be advised regarding areas of study they plan to explore. During this time advising staff within the IEMS department will aid in selecting approved graduate level courses that are acceptable alternatives to replace required courses.

■ The following will be waived for this joint degree program:

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- The limit of nine hours to be shared between undergraduate and graduate programs.
- Undergraduate students taking graduate courses must be within nine hours of graduation
- Undergraduate students taking graduate courses must not register for more than a total of twelve hours in that semester
- Undergraduate students are not eligible to take 6000-level courses

Transfer Notes

- None

Acceptable Substitutes for Transfer Courses

- None

Shared Courses

- Up to 12 credit hours of approved 5000 and 6000 level courses of grades B (3.0) or better may be counted towards the BS and Masters degrees. These 12 credit hours will meet either technical elective or course requirements for the major. The 5000 level courses listed in the plan above are examples. Contact the Graduate Coordinator in the Industrial Engineering and Management Systems department for a list of acceptable courses.

Graduate Courses Link

- None

Program Academic Learning Compacts

- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at: http://www.oear.ucf.edu/alca/academic_learning_compacts.htm

Equipment Fees

- Part-Time Student: \$38 per term
- Full-Time Student: \$77 per term