

# PhD in Industrial Engineering

## Admission

Following are the minimum requirements for admission to the PhD in industrial engineering program.

1. Applicants whose native language is not English must submit official, acceptable scores for either the TOEFL, the Academic Module of the IELTS examination, or the PTE-Academic test. Please visit the Graduate School website (<http://wichita.edu/gradschool/>)<sup>1</sup>, to check English proficiency requirements;
2. Submission of official GRE scores or support letter from departmental graduate faculty is required;
3. Applicants must have (or be nearing the completion of) a master's degree in engineering, physical science or other related disciplines with a minimum cumulative GPA of 3.250 (on a 4.000 point scale) in all graduate coursework;
4. A statement of purpose indicating applicant's research interests, and evidence of the ability to carry out independent research and present it in written English is highly desirable;
5. Submission of two letters of recommendation or support letter from departmental graduate faculty is required; and
6. Prerequisites:
  - a. Completion of the following or equivalent courses:

Course	Title	Hours
IME 255	Engineering Economy	3
MATH 344	Calculus III (students deficient in this are considered for admission only in nondegree status)	3

A natural science course equivalent to that of the undergraduate engineering requirement

- b. Programming competence in at least one of the following languages: C, C++ or Visual BASIC.

## Direct Admission of BS Graduates in Industrial Engineering

The department of industrial, systems and manufacturing engineering (ISME) offers direct admission for *truly exceptional* students to its PhD program. Applicants must have consistent and exceptional credentials throughout all their academic career, including:

- An undergraduate degree in engineering, physical science or other related discipline;
- A minimum GPA of 3.500, on a 4.000 scale, during the final 60 credit hours of coursework; and
- A letter of endorsement for admission from an ISME graduate faculty member. (This requirement reflects the willingness of an ISME graduate faculty member to serve as the research advisor for the applicant upon admission.)

All other minimum requirements for admission into the PhD in industrial engineering program must be met.

<sup>1</sup> Link opens new window.

## Program Requirements

1. **Course Distribution:** Total credit hours = minimum of 72 credit hours  
**Graduate Coursework:** at least 48 credit hours;
  - a. Including a maximum of 24 credit hours transferred from an MS degree in industrial engineering or closely related field;

- b. Excluding dissertation hours;
  - c. Preapproved by the graduate coordinator or department chair before registration;
  - d. With at least 50 percent of coursework (beyond credit hours transferred from the MS degree) from the department;
  - e. Excluding independent study courses.

Course	Title	Hours
<b>Dissertation</b>		
Select at least 24 credit hours in dissertation		24
<b>Required Courses</b>		
IME 724	Statistical Methods for Engineers	3
IME 777	IME Colloquium (three semesters - may include credit for one semester from ISME master's degree)	0
<b>Technical Electives</b>		
Select as many hours as necessary to satisfy the total credit hour requirements (at least 48 credit hours of graduate coursework).		45
Professional and scholarly integrity training (preferably completed in the first semester)		
<b>Total Credit Hours</b>		<b>72</b>

2. **Advisor, Advisory Committee and Plan of Study:** Before completing 12 PhD credit hours at WSU, a student must select an advisor and an advisory committee. With the help of the advisor, the student must prepare a plan of study that needs to be approved by the advisory committee, graduate coordinator and Graduate School before the preliminary and comprehensive exam is attempted. For details of the preliminary examination, please refer to the ISME website.
3. **Preliminary Examination:** Before completing 18 PhD credit hours at WSU, a student must pass the preliminary examination administered by the department in at most two attempts. Students who cannot pass the preliminary exam in 1.5 years will be dismissed from the PhD program.
4. **Dissertation Approval Examination:** Prepare a dissertation research proposal and pass an oral examination of the proposal. A student cannot attempt the examination more than twice.
5. **Dissertation Defense:** Must pass an oral examination of the dissertation.
6. **Other Program Requirements:** All other requirements are the same as those established for the college and the university.
7. **Time Limits:** From the time the student is admitted to the program, no more than 10 years may elapse until requirements for the degree have been completed.

## On the Way MS to PhD Program

A PhD student may apply for the MS in industrial engineering or Master of Engineering Management while being in the PhD program if the student:

1. Files a plan of study, in the semester in which the MS degree is awarded, which satisfies all course option requirements and deadlines for the MS in industrial engineering or Master of Engineering Management;
2. Files an application for degree for the semester the master's will be earned; and

3. Completes a preliminary examination (as applicable to the PhD program).

***Applied Learning***

Students in the PhD in industrial engineering program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by satisfactory completion of a dissertation.