1. **Purpose:**

The purpose of the following document is to define the five steps to becoming a Ph.D.: Completing a Minor, satisfying breadth requirements, passing the Qualifying Examination Requirement, passing the Preliminary Examination, and passing the Final Oral Examination.

2. **Scope:**

This procedure applies to both full-time and part-time Industrial and Systems Engineering (ISyE) graduate students and faculty, and addresses the departmental policies, which apply in addition to the regulations of the Graduate School, with which all graduate students should be thoroughly familiar. The applicable Graduate School regulations may be found in the Graduate School Academic Guidelines, which are available from the Graduate School, or at [http://www.wisc.edu/grad/guidelines/glossindex.html](http://www.wisc.edu/grad/guidelines/glossindex.html). The departmental area committees may also have particular rules for their students.

3. **Related Procedures and Other Documentation:**

<table>
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<th>Procedure No.</th>
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<tr>
<td>ISyE P 08.1</td>
<td>Industrial and Systems Engineering Department Policy for Qualifying</td>
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<td>ISyE 11.1</td>
<td>Examination Requirement</td>
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**Other Documents**

- Graduate School Academic Guidelines [http://www.wisc.edu/grad/guidelines/glossindex.html](http://www.wisc.edu/grad/guidelines/glossindex.html)
4. Procedure: MINOR

4.1 Every student seeking a Ph.D. degree must choose between an Option A minor and an Option B minor.

NOTE 1: Refer to http://www.wisc.edu/grad/catalog/degrees.html#minor for additional details on minor degrees.

NOTE 2: Options A and B are defined in: www.wisc.edu/grad/guidelines/gloss.html#minors.

4.1.1 A student choosing the Option A minor must select a department other than ISyE for this minor, and must satisfy the requirements of the department offering the minor.

4.1.2 A student choosing the Option B minor must complete a minimum of 9 credits of courses from one or more departments. An ISyE course may not be used for the Option B minor, except that a course cross-listed with ISyE may be used if the home department for such course is not ISyE. In addition, the student’s advisor must approve the set of courses being used to satisfy the Option B minor.

4.2 PhD Minor Requirements for Non-IE PhD Students

A PhD candidate from another department taking an Option A minor in ISyE must complete a minimum of 9 credits of ISyE courses numbered 300 or above. A minimum GPA of 3.20 is required for this set of courses. A course with a grade of C or lower cannot be used to satisfy the minor requirement. Students may transfer up to 3 credits from another university to satisfy the minor requirement, subject to the approval of the Graduate Policy and Exams Committee.

Breadth Requirement

4.3 The breadth requirement is to make the Ph.D. student achieve minimum competence in multiple areas of industrial and systems engineering. It consists of taking at least two courses (6 credits) from a list of ISyE courses and attaining a grade of B or above in both courses.

- The list of courses that can satisfy the breadth requirement are provided by area groups from among those numbered 300 or above.
- The list of courses must be approved by the Graduate Exam and Policy Committee and can be found at the department office.
- The courses selected by the student must be approved by the student’s advisor and must be in at least two areas that are different from the area group in which the student’s qualifying exam is taken.
- Courses the student has taken before entering the Ph.D. program will be counted toward this breadth requirement.
- Any transfer credits could also be counted toward this breadth requirement upon the approval by the area group(s) corresponding to the transferred course(s) and the Graduate Exam and Policy Committee.

**EXAMINATIONS**

**NOTE 2:** There are three major examinations in a Ph.D. program: qualifying, preliminary, and final. In addition, there may be one or more examinations to be passed as part of the minor program.

**NOTE 3:** A student is considered to be a Ph.D. candidate (a dissertator) only after finishing their minor, passing their Qualifying Exam Requirement, completing the breadth requirement, and passing their preliminary exam.

**Qualifying Examination Requirement**

4.4 Each student wishing to be a PhD candidate in the ISyE Department must satisfy the Department's Qualifying Examination Requirement as defined in ISyE P 08.1 (Industrial and Systems Engineering Department Policy for Qualifying Examination Requirement).

**Preliminary Examination**

4.5 The preliminary examination is designed to test whether the student has attained the appropriate depth and breadth of knowledge in the student's field of study. Before taking the preliminary examination, the student must satisfy the qualifying exam requirement and the breadth requirement. The scope and content of this examination are determined by the student’s preliminary examination committee. The examination may be combined with the presentation of the student’s preliminary proposal for the dissertation.

**Final Oral Examination**

4.6 The final oral examination consists of the presentation and defense of the Ph.D. dissertation. It is conducted under the Graduate School rules. *This must be completed within FIVE YEARS after passing the Preliminary Examination.*

**NOTE 4:** See ISyE P 11.1 regarding the Criteria for Satisfactory Academic Progress as a Graduate Student in ISyE.

**FOREIGN LANGUAGE**

4.7 The ISyE Department has no foreign language requirement for the Ph.D. degree.

**AREA OF SPECIALIZATION REQUIREMENTS**

4.8 A student pursuing a Ph.D. should contact the chairperson for their intended area groups for any additional Ph.D. requirements.

END OF PROCEDURE