Following completion of a major portion of the course work defined in the degree plan, and upon certification of the doctoral supervisory committee that the student has (1) maintained a minimum 3.4/4.0 GPA and (2) progressed sufficiently in the study of industrial engineering and its research tools to begin independent research in the area of the proposed dissertation, the student is ready to take the Preliminary Examination. This exam normally takes the form of a dissertation proposal.

The purpose of the preliminary examination is to test the adequacy of a student's background related to his/her area of concentration, and to determine if the student is adequately prepared to formulate and undertake acceptable dissertation research. The procedures are as follows:

1. Normally, the Ph.D. student take the preliminary examination by the end of the fourth full semester of the Ph.D. program. The student needs to register the 0-credit hour Preliminary Exam course in the semester when the exam is taken.

2. The student must make arrangements with the major professor to schedule a 5-week time period for the examination. The student is required to bring an Application for Preliminary Examination form (available from the department) to the oral examination. After completion of the examination, the supervisory committee chair should submit the signed form to the Director of Graduate Studies.

3. The five-week period will be spent as follows:
   a. With the consultation of the major professor, the student will submit a research proposal to the supervisory committee. This document should be approximately twenty (20) typed double-spaced pages. The proposal should consist of a statement of the problem, research objectives, an extensive review of literature, a detailed description of the planned approach, expected outcomes and a schedule.
   b. The committee will submit written questions to the major professor for collection by the student two (2) weeks after submission of the research proposal. These questions will relate to the research proposal and course work.
   c. In preparation of the oral exam, the student will have two (2) weeks to develop written responses to the questions. These responses will be submitted to the major professor, who will then distribute the responses to the committee members. The student should submit one complete, bound set of answers in addition to subsets of responses appropriate to each committee member.
   d. The oral examination will be held within one week of submission of the written responses. This examination will be primarily related to the research area and the student's written responses. Appropriate related fundamental concepts may also be covered.
   e. Pass/fail is based on the combined written and oral responses to committee questions. A majority of committee votes and a pass vote by the committee chair are required to pass.
   f. A student who passes the examination will be declared to be a candidate for the Ph.D. degree.
   g. Only one retake of the exam is allowed.

### Student Information: (please print or type)

<table>
<thead>
<tr>
<th>LAST NAME</th>
<th>FIRST NAME</th>
<th>MIDDLE INITIAL</th>
<th>STUDENT NUMBER</th>
<th>TELEPHONE</th>
<th>E-MAIL</th>
<th>TOPIC OF EXAMINATION</th>
<th>MAJOR PROFESSOR</th>
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### Examining Committee:

<table>
<thead>
<tr>
<th>MAJOR PROFESSOR</th>
<th>SIGNATURE</th>
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<tr>
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### Comments of the Examining Committee:

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Examination Result: [ ] Passed  [ ] Failed