Kansas State University
Mechanical and Nuclear Engineering (MNE) Department
Graduate Program

PhD Degree Program Requirements (ME and NE Programs)

All doctoral students are responsible for reviewing and understanding all Graduate School policies and procedures associated with KSU graduate students and with the Doctoral Degree. This information can be found in the KSU Graduate Handbook and the KSU Graduate Catalog.

To gain admission to the Ph.D. program, the student must be approved for admission both by the graduate faculty of the department and by the Graduate School.

The Ph.D. requires at least three years of full-time study beyond the bachelor's degree, equivalent to at least 90 semester hours, including a dissertation representing at least 30 hours of research credit. Students who hold a master's degree may request transfer of up to 30 hours of that degree toward a Ph.D.

The Ph.D. is awarded to candidates who have demonstrated unique ability as scholars and researchers as well as proficiency in communication. The degree also certifies that the candidate has displayed familiarity and understanding of the subject matter in the discipline and possesses the ability to make original contributions to knowledge.

1) All doctoral students must formulate their Program of Study in consultation with their major professor and their supervisory committee. Full-time students must file their programs before the end of their second semester of graduate study, and part-time students must do so upon the completion of 9 credit hours.

2) The doctoral student is required to complete a total of 90 credit hours of work beyond the Bachelor's degree. Up to 30 credits from a Master's program can be applied towards the Ph.D. degree. The Doctoral Program of Study must include:
   a) a minimum of 15 hours of graded coursework beyond the Master’s degree (all 15 hours MUST be at the 800 level or above, in addition to doctoral research credit hours) for candidates entering the Ph.D. program with a Master’s degree.
   OR
   a minimum of 30 hours of graded coursework beyond the Bachelor’s degree (including at least 15 hours at the 800 level or above, in addition to doctoral research credit hours) for students who bypass the master's degree.
   b) no more than 12 credit hours of 500 level courses are permitted in a doctoral program. No 500-level course taken in the student's department may appear in the program of study.
   c) a minimum of 30 hours of doctoral research credit.
   d) the PhD candidate must satisfy the 75% attendance requirement (0 credit hour) in at least four semesters of ME800 Graduate Seminar/Research Paper. (refer to ME800 course requirements)

PhD Examination Guidelines

All doctoral students in the MNE Graduate program are required to successfully pass the following examinations:

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<td>PhD Preliminary Examination*</td>
<td>After submittal of the Doctoral Program of Study and before the end of the student’s third semester as a PhD student</td>
<td>Written and Oral</td>
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<td>Final Dissertation Defense#</td>
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* - this will satisfy the KSU Graduate School’s “written preliminary examination” requirement. All doctoral students must satisfy all Doctoral Program requirements as defined in the Graduate Handbook (http://www.ksu.edu/grad/handbook/chap3.htm#1).

** - as defined in the Graduate Student Handbook, the Doctoral Supervisory Committee consists of the graduate faculty identified on the approved Doctoral Program of Study. The Doctoral Supervisory Committee does NOT include the external chair appointed by the Graduate School AFTER successful completion of the preliminary examination.

# - this will satisfy the KSU Graduate School’s “Dissertation” and “Final Examination” requirements. All doctoral students must satisfy all Doctoral Program requirements as defined in the Graduate Handbook (http://www.ksu.edu/grad/handbook/chap3.htm#1).
PhD Preliminary Examination Guidelines

1. The Preliminary Examination is designed to test the student's breadth and depth of knowledge in the proposed field of specialization, as well as the student's ability to explore problems on the boundaries of knowledge. Satisfactory performance in the examination is an indication that the student is prepared to perform independent work toward the doctoral degree and results in the student being classified as a doctoral candidate upon affirmative recommendation by the supervisory committee.

2. The Preliminary Examination should be completed as soon as the supervisory committee and the PhD student feel that it is practical and no later than the end of the PhD student’s 3rd semester in the PhD program. The Doctoral Program of Study must be completed and approved prior to the preliminary examination.

3. Once the supervisory committee and the student decide when the Preliminary Examination is to be taken, the student should notify the Graduate School at least one month before the scheduled date, by completing and submitting a “Request for Preliminary Examination Ballot” form. A ballot will then be sent to the major professor by the Graduate School.

4. Once the student’s Preliminary Examination date has been set, it is expected that the supervisory committee, led by the student’s major professor, will meet privately to discuss the student’s field of research, as well as the student’s completed coursework, and to agree upon the one or more research problem(s) that will be presented to the student. Although it is expected that the research problems presented to the student will be in his/her general field of study, the research problems will not be directly related to the student’s specific area of PhD research.

5. On the pre-determined Preliminary Examination date, the supervisory committee will present the PhD student with one or more research problem(s). These problem statements will each be brief and will be presented in written format with oral discussion to ensure that the PhD student thoroughly understands the problem(s) to be addressed.

6. The PhD student will select one (if presented with more than one) of the problems presented by the supervisory committee and will be given an appropriate amount of time (as determined by the supervisory committee, but typically 1-2 weeks) to formulate a research strategy with which to solve the selected research problem. This problem formulation will be summarized in the form of a written report and will be submitted to the supervisory committee before the end of the pre-determined time period.

7. Within one week of the submission of the written document, the PhD student will give an oral presentation to the supervisory committee outlining and describing the formulation to the research problem. During this oral component of the Preliminary Examination, the supervisory committee may ask the PhD student questions pertaining to the original research problem statement, the written report, and the oral presentation.

8. This oral component of the Preliminary Examination will be administered in the same manner in which a traditional Master’s or Doctoral final oral defense is conducted. At the conclusion of the oral component of the Preliminary Examination the supervisory committee will ask the PhD student and all visitors to leave the room. The supervisory committee will then discuss the student’s performance associated with the written report and the oral examination. Based on this discussion, the supervisory committee will take the appropriate actions regarding the disposition of the Preliminary Examination ballot.

9. The results of the Preliminary Examination are indicated on the ballot by the signatures of the members of the supervisory committee. The student is considered to have passed the Preliminary Examination and to be recommended to candidacy if at least three fourths of the supervisory committee votes to approve candidacy.

10. In case of failure of the first Preliminary Examination, the supervisory committee may approve a second examination with no more than one dissenting vote. A second Preliminary Examination can be taken no sooner than three months following the initial failure and no later than 6 months following the initial failure. Once the supervisory committee and the student decide when the second Preliminary Examination is to be taken, the student should notify the Graduate School one month before the scheduled date. The composition of the supervisory committee shall not be changed before a final decision is reached on admission to candidacy. A second failure constitutes denial of admission to candidacy for the doctoral degree in the field of study of the graduate program.

11. Copies of the original problem statement and the student’s written report will be filed with the MNE Graduate Program Coordinator and made available on request to any graduate faculty member for a period of two years from the date of Preliminary Examination.