

Lynn Booth & Kent Kresa Department of Aerospace

Aerospace Ph.D. Candidacy Exam:

The candidacy exam should be taken before the start of the second term of the third year of residence at the Institute. The intent of this oral exam is to determine whether the student has prepared a thesis topic and understands and has planned the research that will be necessary to complete the thesis and graduate with a Ph.D. degree.

The selection of the Candidacy Committee is to be discussed with the advisor, and must be approved by the Option Representative. Note that the advisor may not serve as the chairman of the Candidacy Committee. One of the three committee members besides the advisor must be a faculty member outside the Aerospace Department but in a field related to the thesis subject. It is the responsibility of the student to ascertain that the proposed members are available and willing to serve in their respective capacities on the Committee.

Prior to the Candidacy Exam, the student must complete the Ph.D. Candidacy Plan of Study, showing progress towards completion of the candidacy course requirements, and the Candidacy Examination Data sections of their REGIS record no later than one week before the proposed date of the exam for subsequent approval by the Option Representative

The student will prepare and discuss with the advisor a brief written outline of their research, defining the research area, specific topic and research goals, summarizing progress to date and future work. Further guidance on the structure of this outline is provided at the end of this document. The document to be provided to the committee members must be prepared in not smaller than 10-point font and must not exceed two pages in length including all graphics, citations and other material. This outline shall be provided to the committee members no later than one week prior to the exam and at the beginning of the exam.

The candidacy exam itself is divided into two parts. In the first part, the student will provide a brief account of the research and progress made. The presentation may not exceed 20 minutes with a maximum of 12 slides of overheads including title, outline of the presentation and conclusions/future work. During this presentation, there will be no interruptions from Committee members other than for questions of clarification. In the second part of the candidacy exam, the committee members will present questions for the student to consider related to the student's presentation, and the thesis topic.

To pass the candidacy exam, the student's performance in both parts of the exam must be satisfactory. On successful completion of the candidacy exam and the candidacy requirements listed in the catalog, the student will be admitted to Ph.D. candidacy. If the student is unsuccessful in passing the exam, the committee will exercise one of the following options:

1. **Retake:** Recommendation to take a second candidacy exam within a period to be specified by the committee.
2. **Fail:** The student will not proceed further towards the Ph.D. and should consult the Institute Catalog and the advisor concerning the possible completion of an Engineers' Degree.

Guidelines for Preparing the Candidacy Research Outline:

Candidates for an Aerospace Ph.D. must submit to the Candidacy Examination Committee a two-page summary describing their thesis research goals no later than one week before the exam. This summary must be prepared in not smaller than 10-point font and must not exceed two pages in length including all graphics, citations and other material.

The questions listed below may be used as a guide to the preparation of the two-page summary:

1. *What is the research about? What are the goals/objectives?*
2. *Why is the work relevant?*
3. *How will the proposed research be done? What methods will be used?*
4. *What new understanding is expected to emerge from this work?*
5. *How does the proposed research advance our state of knowledge.*