DEFINITION OF TERMS
IN THE GRADUATE PROGRAM ASSESSMENT PROCESS

A. Program Mission: How the program intends to serve its constituents.
   The department, by some means, composes the mission statement of its graduate program. The mission statement articulates the nature and the purpose of the program.

B. Program Constituents: Who is to be served by the program.
   Primary constituent group is graduate students in the program.

C. Program Objectives: The means by which the program ensures delivery of the promised services.
   The department, by some means, identifies a set of indicators that can be used to ensure the delivery of its mission.

D. Educational Student Outcomes: The information and skills the students need to learn.
   The department stipulates what the student will know, believe and be able to do upon completion of the program. Outcomes should be observable and measurable.

E. Assessment of Program Objectives: Assessment is the process of gathering, analyzing and interpreting evidence about the effectiveness of the program. The department establishes the tools by which to measure and determine if program objectives are being met.

F. Assessment of Educational Student Outcomes: Assessment is the process of gathering, analyzing and interpreting evidence about the effectiveness of the program. The department establishes the tools by which to measure and determine if educational student outcomes are being met.

G. Feedback Loop: The process by which faculty evaluate the evidence collected to make reasoned changes in the program whenever necessary to enhance or improve the program. The department establishes a procedure for faculty to evaluate the evidence collected each year. This evidence is used to make decisions about program changes and ensure continuous improvement.

H. Annual Report: An Assessment Report produced annually that indicates:
   1. results from data collection during the academic year (based on assessment plan)
   2. record of dates the Graduate Assessment Committee met to consider the assessment results
   3. summary of the decisions made at the meetings by the faculty
   4. summary of how assessment data was used to improve the program
   5. the assessment plan for the next academic year
   6. progress on items in the Memorandum of Understanding*

I. Assessment Plan: This document specifies the:
   Program mission
   Program constituents
   Program objectives
   Educational student outcomes
   Program assessment activities (when and how the various program objectives will be measured)
   Educational student outcomes assessment activities (when and how the various educational student outcomes will be measured)
   Feedback loop used by the faculty

* This document is jointly produced (by deans and the program area) after KBOR Program Review. It specifies goals (and timelines for accomplishment of those goals) to improve the program based on recommendations coming from the KBOR review process.
A. Mission Statement

To prepare students for careers in aerospace engineering and related fields, and for graduate study

B. Constituents

The graduate students in the Department of Aerospace Engineering are the program constituents.

C. Program Objectives

a. To ensure the admission of qualified students into the program each year.

b. To provide qualified faculty for the program.

c. To provide appropriate laboratories and access to them for the program.

d. To provide an appropriate variety of graduate courses for the program.

e. To enroll a sufficient number of students to support the courses offerings.

f. To achieve an acceptable placement rate within one year of graduation either in jobs or in graduate programs for further study.

g. To ensure graduates are satisfied with the program (three years after graduation).

h. To ensure continued quality of student performance during the program.

D. Educational Student Outcomes

a. Students must demonstrate competency in one of three areas of specialty: aerodynamics and fluid mechanics, structures and solid mechanics, flight dynamics and controls.

b. An overwhelming majority of the students will be able to self-educate.

E. Assessment of Program Objectives

a. **Program Objective (a) – Admission of qualified students:**

   - Admit fewer than 20% of the qualified applicants into categories other than “full standing”. Admission to full standing requires a Bachelor of Science degree in aerospace engineering or related field with a minimum GPA of 3.00 out of 4.00 in undergraduate studies.

   - Admit only international applicants who meet the minimum TOEFL score of 550 paper-based or 213 computer-based.

   **Results:**

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b. **Program Objective (b) – Providing qualified faculty for the program:**

   - More than 90% of the faculty members must be full members of the graduate faculty and have doctoral chairing status.

   - The adjunct faculty teaching graduate level courses must hold at least a Graduate Faculty Associate status as approved by the Graduate School.

   - More than 75% of the graduate level courses must be taught by regular faculty members.

   **Results:**

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c. **Program Objective (c) – Providing appropriate laboratories:**

- Appropriate technical personnel must be available for service and maintenance of the department laboratories as deemed by the department chairperson.
- A questionnaire is administered to students for their feedback on the quality and accessibility of the labs.

**Results:**

d. **Program Objective (d) – Appropriate variety of graduate courses:**

- The department must offer 10 or more graduate level courses in each semester, excluding thesis and dissertation hours.

**Results:**

e. **Program Objective (e) – Enrolling Sufficient Number of Students:**

- The department must enroll more than 50 degree-bound students per semester.
- The department must grant in excess of 10 Master of Science degrees per academic year.

**Results:**

f. **Program Objective (f) – Placement rate and graduate school admission:**

- More than 85% of the graduates of the program must be placed within one year of graduation either in jobs or in graduate programs for further study.

**Results:**

g. **Program Objective (g) - Satisfaction with the program:**

- At least 70% of the graduates will express satisfaction with their education.

**Results:**

f. **Program Objective (f) - Student performance:**

- Students are required to maintain a cumulative GPA of 3.00 out of 4.00 while enrolled in the program to maintain full standing.
- Students are required to complete a minimum of 30 graduate semester credit hours for thesis option or 33 hours for non-thesis or directed-project options.
- Students with the thesis option or the directed-project option are required to pass an oral examination on their thesis or directed project. Students with the non-thesis option are required to pass a written examination in their major field of study.
- Students are encouraged, but not required, to submit their theses for publication.

**Results:**
F. Assessment of Educational Student Outcomes

a. **Educational Outcome (a) – Competency in areas of specialty:**

- Each student must satisfactorily complete the three core courses in his/her area of specialty.
- Each student must satisfactorily complete at least 12 credit hours in his/her area of specialty including the core courses.
- Students must pass at least one graduate level course in mathematics or statistics.
- Students in the coursework option must pass a comprehensive exit exam over the contents of their core courses.
- Students in the directed-project option must prepare a formal final report on their projects and present the results to the satisfaction of their advisory committee.
- Students in the thesis option must prepare a thesis on their research projects and defend it to the satisfaction of their advisory committee.

**Results:**

b. **Educational Outcome (b) – Self Education:**

- Students in thesis and directed-project options demonstrate self-education by completing independent research.

**Results:**

G. Feedback into the Program

**Process:**

The department has a Graduate Assessment Committee composed of the two graduate coordinators and a third member appointed by the department chairperson. This committee meets annually to review the results of the assessment and to provide feedback into the program. The same committee also reviews the program mission, objectives, outcomes, and the assessment process periodically and in consultation with other faculty members.

**Results:**

H. Annual Report:

The Assessment Report documents:

- results from data collection during the academic year
- dates when faculty met to consider the results
- summary of decisions made at the meeting of the faculty
- when issues identified at the meeting will be considered