

**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.

**GRADUATE PROGRAM ASSESSMENT REPORT, 2007-2008
WICHITA STATE UNIVERSITY**

Program Name: PhD in Aerospace Engineering **Date:** October 15, 2008

School/College: Engineering **Campus Box:** 44

A. Mission Statement

To prepare students for careers in Aerospace Engineering and related fields, research organizations, and universities.

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 laboratories 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).

D. Educational Student Outcomes

- a. Students will demonstrate competency in their area of specialty. The three areas of specialties are: (1) aerodynamics and fluid mechanics, (2) structures and composite materials, and (3) flight mechanics and control. Students must pass a comprehensive examination composed of six courses.
- b. Students will be able to self-educate. Student will be able to conduct independent research leading to his/her Dissertation.

E. Assessment of Program Objectives

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

- 100% of the students will be admitted in full standing (full standing requires a Master of Science degree in aerospace engineering or related field with a minimum GPA of 3.25 out of 4.00 in the last 60 hours).
- International applicants must meet the minimum TOEFL score of 550 paper-based or 213 computer-based are admitted.

Results:

- During the academic year 2007-2008, six students were admitted to the program in full standing.
- All international students met the TOEFL score requirement.

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.

Results:

- Every tenure-track and tenured faculty member with the exception of 1 faculty has doctoral chairing status.

c. Program Objective (c) – Providing appropriate laboratories and access to those labs:

- Appropriate technical personnel will be available for service and maintenance of the department laboratories. The department employs one full-time technician and two student assistants to help in maintaining the department laboratories.
- Appropriate access to laboratories is provided for students (as assessed by students on the Graduate School exit survey).

Results:

- The College of Engineering employs two full-time IT technicians to help in maintaining the computer laboratories and students' computer hardware/software needs.
- The department shares its laboratories with the National Institute for Aviation Research (NIAR) located on the campus of WSU.

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:

- The department's offering of the graduate courses during the academic year 2007-2008 was as follows: 9 courses in Fall 2007, 13 courses in Spring 2008.

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

- The department must enroll more than 10 degree-bound students per semester (averaged based on the last 5 years).
- The department must grant in excess of 2 PhD degrees per academic year (averaged based on the last 5 years) .

Results:

- At the end of the 2007-2008 academic year, the department enrolled 13 degree-bound doctoral graduate students in the program.
- During the academic year 2007-2008 the department granted 4 doctoral degrees. The average over the last 5 years is 3.5 degrees/year.

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

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

Results:

- All four graduates were employed upon graduation.(See Table 1/page 4)

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

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

Results:

No data is available for this academic year.

F. Assessment of Educational Student Outcomes

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

- Each student must satisfactorily complete five core courses in each area of specialty, identified by the faculty in that area.
- Each student must satisfactorily complete at least two graduate level courses in mathematics or statistics.

Results:

- All graduates passed the core courses in their areas of specialty with an average of B or better.
- All graduates had satisfied the mathematics/statistics requirement before graduation.

b. Educational Outcome (c) – Self Education:

- 50% of the students must have passed their comprehensive examinations.
- 100% of the students have conducted independent research leading to their dissertation.
- 100% of the students must defend their dissertation successfully.

Results:

- During the academic year 2007-2008, 1 student attempted comprehensive exams, and 1 passed.

G. Feedback into the Program

Process:

The graduate coordinator is responsible for collection of the data pertaining to the assessment report. The department has a Graduate 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:

- During the academic year 2007-2008 all of the established outcomes were met. Therefore, no feedback into the program was necessary.

- The Departmental Graduate Committee has reviewed the program mission, objectives, outcomes, and the assessment process for the academic year 2007-2008. No recommendation was proposed by the committee.

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 again

Table 1: PhD Degree Recipients

Academic Year 2007-2008

Semester / Name	Employer / Graduate School
December 2007:	
Ismael Heron	Bombardier, Wichita
Justin A. James	Cessna, Wichita
Lakshmi S. Nizampatnam	Aurora Flight Sciences, Manassas, VA
Javier Herrero	Boeing, Seattle
May 2008:	
August 2008:	