

Degree Program Assessment Plan

Name of Department CMS

Name of Degree Program Applied Statistics

Date Plan Submitted 3/15/2008

Dean's Approval _____
(Dean's signature)

List learning outcomes to be assessed and the methods of assessment to be used for each.
Also establish a timetable for conducting assessment for 6 years.

(Each program must identify a minimum of three student learning objectives that it is committed to assess on an ongoing basis. Assessments of learning objectives may be scheduled at intervals of up to three years, but departments must complete at least one formal assessment of one program learning objective each year.)

Learning Objectives	Methods of Assessment	Direct or Indirect	Time-2007 - 2012
A. Graduates will demonstrate a basic knowledge of statistics and ability to use computational procedures.	Random Samples of Final exams, homework or classroom demonstrations in Stat 3309 and Stat 3310; also in one senior-level (Stat 43xx) course and in a Senior project (4395) or W-course (requiring a written report, with presentation). An initial exit interview will be developed.	Direct, indirect	2008, 2011
B. Graduates will acquire analytical, critical reasoning and problem-solving skills. They should be able to design an experiment, collect and analyze data.	Random Samples of Final exams, homework or classroom demonstrations in Stat 3309 and Stat 3310; also in one senior-level (Stat 43xx) course and in a Senior project (4395) or W-course (requiring a written report, with presentation). The exit interview will be tested.	Direct, indirect	2009, 2012
C. Graduates will report statistical knowledge, orally and in writing and will apply statistical modeling to real-world problems.	Random Samples of Final exams, homework or classroom demonstrations in Stat 3309 and Stat 3310 and one senior-level (Stat 43xx) course and a Senior project (4395) or W-course (requiring a written report, with presentation) The exit interview will be finalized.	Direct, indirect	2007, 2010



Assessment Form

Department: CMS

Degree Program: STATISTICS

Learning Outcome Goal: *(one per form)*

C. Graduates will be able to report statistical knowledge, both orally and in writing and will apply statistical modeling to real-world problems (2006-2007)

Assessment Procedure *(Include identification of who is responsible for conducting this assessment and the date on which it was completed):*

A selection of CMS Faculty and some participants from government or industry reviewed projects from the senior project (capstone) course STAT 4395. They judged whether the students were able to: understand the appropriate statistical knowledge; apply it to real-world problems; analyze statistical output; write a 20-page paper, including appendices and software as needed; respond appropriately in an oral presentation. Students were graded on both content of the written document, presentation of the project and ability to answer audience questions. Although there are alternate choices in addition to the STAT 4395 course, all graduates must successfully complete a senior-level writing course that displays deep understanding, encompasses applications, results in both a written and oral presentation..

The department chair and members of the Statistics Program Committee are ultimately responsible for conducting this assessment.

Assessment Results *(Be as specific as possible):*

In 2006, 4 students successfully completed STAT 4395; 3 students completed the writing course STAT 4307 Time Series. All students showed competence in effective oral and written communication skills; all projects exhibited real-world modeling problems.

In 2007, no students were enrolled in STAT 4395; 2 students completed the writing course STAT 4310. There was no oral presentation but there was an adequate lower level of written communication. Real-world problems were modeled, but to a lesser degree than in the senior project class.

The more recent assessment procedure, which uses a matrix of outcomes to test for explicit concepts/skills was not yet implemented.

Use of Results: (Include dates of actions taken).

In 2006, there were 4 graduates in Statistics. In 2007, there were no graduates in Statistics.

The Statistics Committee created a predictable schedule for 4000-level courses so that students and advisors could better arrange course-scheduling for graduation. Since most students at UHD work and/or have families, most can only expect to take 2 or 3 courses per semester. Scheduling should be available early to accommodate the students.

A minor in statistics was introduced to accommodate finance and/or other business students and encourage greater enrollment in upper-level courses.

Meeting Notes (*List dates of meetings when assessments results were reviewed and analyzed and decisions made regarding how results could be used to improve program quality. Beginning in 2008, the attached meeting notes template should record what took place at all assessment meetings. Meeting notes are to be maintained by the Department.*)

Fall, 2007: October; November

Assessment matrix for Learning Outcome: Basic concepts of statistics and computational procedures

CONCEPT	STAT 3309	STAT 3310	STAT 43XX	Senior Project/
Understand a statistical topic (such as: frequency distributions, confidence intervals, hypothesis testing)				
Find/explain probability distributions				
Understand graphs and tables of probability distributions				
Interpret Models				
Use a statistical package (such as Excel)				
Exit Interview				

Assessment: For each category, choose a sample of final exams and/or projects. Several statistics faculty will decide benchmarks to show understanding of these concepts in advance and will report the following:

_____ % showing good to excellent understanding for concept x

_____ % showing poor understanding of concept x

A plan for improvement of faulty concepts will be suggested.

Assessment matrix for Learning Outcome: Statistical reasoning, problem-solving, and statistical analysis

CONCEPT	STAT 3309	STAT 3310	STAT 43XX	Senior Project
Written interpretation of statistical results				
Improvements in a sequence of written report(s)				
Summarizing outcomes of a statistical procedure in a precise manner				
Public presentation (internal or external)				
Exit Interview				

Assessment: For each category, choose a sample of final exams and/or projects. Several statistics faculty will decide benchmarks to show understanding of these concepts in advance and will report as follows:

_____ % showed good to excellent understanding for concept x;

_____ % showed poor understanding of concept x

A plan for improvement of faulty concepts will be suggested.

Assessment matrix for Learning Outcome: Effective oral and written communication

CONCEPT	STAT 3309	STAT 3310	STAT 43XX	Senior Project
Written interpretation of statistical results				
Improvements in sequence of written report(s)				
Summary of outcomes				
Public presentation (internal or external)				
Exit Interview				

Assessment: For each category, choose a sample of final exams and/or projects. Several statistics faculty will decide benchmarks to show understanding of these concepts in advance and will report as follows:

_____ % showed good to excellent understanding for concept x;

_____ % showed poor understanding of concept x

A plan for improvement of faulty concepts will be suggested.

EXIT SURVEY FOR STATISTICS STUDENTS, DRAFT 2

We are interested in your perception of the Statistics education you receive at UHD. Your answers will help us to improve all aspects of the Program. Thank you taking the time to complete this survey.

1. What course(s) did you like most? _____ Comments

2. What course(s) did you like least? _____ Comments

3. Do you feel that your training in applied statistics was sufficient for graduate school?
_____ or, for the job market? _____
4. How comfortable were you with the technology used in your classes? _____

5. How comfortable were you with written projects or presentations in class?

6. Were there classes you wished you had taken but didn't because:
a) of the time they were offered? _____
b) other? _____
c) they were not offered? _____
7. What are your plans for the near future?
a) graduate school? _____; what area? _____
b) job market: I have a job _____; I'm looking for a job _____
8. If you are planning to enter the job market soon, what salary are you seeking?
a) \$30K-\$40K b) \$40K-\$50K c) \$50K-\$60K d) \$60K-\$70K e) >\$70K
9. Please provide your e-mail address _____
10. Please provide your phone number(optional) _____