

**Revised Template
Degree Program
Assessment of Student Learning Plan
Kansas State University**

Check the box if your program's student learning outcomes have been modified since November 2003. If so, please email (apr@ksu.edu) or attach a hard copy to this document.

A. College, Department, and Date

College: *College of Arts & Sciences*
 Department: *Statistics*
 Date: *September 20, 2005*

B. Contact Person(s) for the Assessment Plans

James J. Higgins, professor
John E. Boyer Jr., professor

C. Degree Program

B.A./B.S. in Statistics

D. Assessment of Student Learning Three-Year Plan

1. Student Learning Outcome(s)

- an understanding of the importance of statistical theory and how it is applied to practical problems (#1 on department's list)*
- the ability to use graphical methods to display and interpret information (#3 on department's list)*
- the ability to communicate statistical concepts to non-statisticians (#8 on department's list)*

Special rationale for selecting these learning outcomes (optional):

Relationship to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):

Program SLOs	University-wide SLOs (Undergraduate Programs)					Program SLO is conceptually different from university SLOs
	Knowledge	Critical Thinking	Communication	Diversity	Academic / Professional Integrity	
1. #1	x	x			x	
2. #3	x	x	x		x	
3. #8	x	x	x		x	
4.						
5.						

2. How will the learning outcomes be assessed? What groups will be included in the assessment?

An undergraduate assessment committee will be formed; the department's undergraduate advisor will be included on the committee. The committee will monitor the courses identified as corresponding to each of the SLO's. (See, attached, at the end of this document, a list of the department's identified learning outcomes as well as a matrix which aligns required courses with those outcomes.)

For each statistics major enrolled in courses taught outside the department, the committee will record the grade earned.

For each major enrolled in courses taught within the department, the committee will use two pieces of information. The first will be the grades earned by the student in the course. The second will be the instructor's assessment of a problem or project, proposed by the assessment committee and included at some point within the course, for each undergraduate statistics major (on a 1 to 4 schedule). Although the project scores will be reported only for statistics majors, the committee will see that the project is appropriate for all students taking the course.

The undergraduate assessment committee will prepare a report indicating average score (on a 1-4 scale) for all majors in each of the contributing courses.

Hence the groups involved in the assessment process will be the instructors of the identified courses and the members of the undergraduate assessment committee.

For SLO #1, courses that will be utilized will be Statistics 510, Statistics 511 and a statistical design course (Stat 710, 720, or 722) chosen by the student.

For SLO #3, courses that will be utilized will be the student's choice among Statistics 320, 330, 340 or 350, the student's choice among Statistics 341 and 351, and Statistics 705. All these courses currently require a significant amount of work with graphical output already.

For SLO #8, courses that will be utilized will be the student's choice among Statistics 320, 330, 340 or 350, the student's choice among Statistics 341 and 351, and English 516 (the technical writing course).

3. When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?

The committee shall present a report to the departmental faculty by the second faculty meeting of each fall semester, summarizing the results of its observations. The committee will distribute descriptions of the projects or problems they asked instructors to include and members will be prepared to describe to their colleagues the instructors' reactions and assessments of them. The faculty shall then use this information to consider possible changes in course descriptions and content and/or degree requirements.

The implementation of the undergraduate assessment committee will take place in year 1. That committee will identify courses and opportunities to evaluate in its first year. It will collect two years' worth of data and in the fall of year three will make its initial report to the faculty. Subsequently, it will be asked to report to the faculty in the fall of each year.

4. What is the unit's process for using assessment results to improve student learning?

Information derived from the assessment committee's findings will be considered in the potential rewriting of course descriptions or revision of degree requirements for majors.

**Student Learning Outcomes for the BA/BS degree in Statistics
at Kansas State University**

Candidates for the Bachelor of Arts or Bachelor of Science degree in Statistics will have demonstrated:

1. an understanding of the importance of statistical theory and how it is applied to practical problems
2. familiarity with regression and analysis of variance methodologies
3. the ability to use graphical methods to display and interpret information
4. familiarity with statistical programming packages
5. familiarity with the basic computer skills used in statistics
6. familiarity with the basic mathematical skills used in statistics
7. an understanding of the importance of using data when making decisions
8. the ability to communicate statistical concepts to non-statisticians
9. an understanding that statistics may be applied to any field of study

Matrix of Student Learning Outcomes and Required Courses for the BA/BS degree in Statistics

Courses outside the department	SLO #1	SLO #2	SLO #3	SLO #4	SLO #5	SLO #6	SLO #7	SLO #8	SLO #9
Math 220						X			
Math 221						X			
Math 222						X			
CIS 200					X				
Math 551 or other					X				
Engl 516								X	
Statistics Courses									
Stat 320, 330, 340, 350			X	X				X	X
Stat 341 or 351		X	X	X			X	X	X
Stat 510	X					X			
Stat 511	X					X			
Stat 704		X		X			X	X	X
Stat 705		X	X	X			X	X	X
Stat 710, 720, or 722	X			X			X		X
700 level Stat elective				X			X	X	