Cover Sheet for Revised Assessment Plans

Directions: Please complete a separate cover sheet for each degree program (e.g., Associates – Doctorate). Feel free to make copies of this sheet if needed. Those graduate programs with an integrated master's and doctoral program may submit one cover sheet. The department head and respective dean are to sign before the plans are submitted to the Provost.

Department / Unit: Department of Statistics

Title and Level of Academic Program (e.g., Chemistry, Ph.D.): Ph.D. Statistics

When submitting an Assessment Plan, please check and indicate when the faculty endorsed the plan.

☑ Faculty have met, reviewed, and endorsed the Assessment Plans being submitted for this degree program.

Date of Endorsement: 9/20/05

Department Head's Signature

Date: 1/19/06

College Dean's Signature
(Required for Undergraduate Programs)

Date

Dean of the Graduate School's Signature
(Required for Graduate Degree Programs)

Date: 2/10/06

November 1, 2004: Assessment plans are to be sent to the respective Dean
November 29, 2004: Relevant materials are to be sent from the Deans to the Provost

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

Suzanne Dubnicka, Assistant Professor
Dallas E. Johnson, Professor
Jim Neill, Associate Professor
Haiyan Wang, Assistant Professor

C. Degree Program

PhD in Statistics

D. Assessment of Student Learning Three-Year Plan

1. **Student Learning Outcome(s)**
   1. *The ability to carry out research in statistical science*
   2. *The ability to access and read statistical literature*
   3. *An understanding of the major modes of statistical inference, frequentist, decision, theoretic Bayesian, and likelihood*
   4. *Knowledge of statistical procedures based on computation and simulation*
   5. *The ability to communicate with applied scientists and the statistical community*

Special rationale for selecting these learning outcomes (optional):

Important for a well-educated professional statistician.

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

	University-wide SLOs (Graduate Programs)			Program SLO is conceptually different from university SLOs
Program SLOs	Knowledge	Skills	Attitudes and Professional Conduct	
1.	X	X		
2.	X	X		
3.	X	X	X	
4.	X	X	X	
5.		X	X	

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

All students admitted to the PhD program or current M.S. students seeking admission to the PhD program are included in the assessment. Learning outcomes are assessed (as appropriate) by each of the following:

1. PhD Preliminary Exam, PhD Dissertation, PhD Final Oral Exam (Direct Measures)

2. PhD Preliminary Exam, PhD Dissertation, PhD Final Oral Exam (Direct Measures)

3. Program of Study, Qualifying Exam, PhD Coursework (Direct Measures)

4. Program of Study, PhD Coursework, PhD Research (Direct Measures)

5. Statistical Consulting Experience, Portions of many Courses on Program of Study, PhD Final Oral Exam (Indirect Measures)

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

1.& 2. The PhD Preliminary Exam is usually given at the time a student and his/her Major Professor chooses. The exam is given by the student's committee and evaluated by the committee. All graduate faculty in the Department are invited to participate in the Preliminary Exam process.

The PhD Dissertation is evaluated by the student's committee prior to the scheduling of a student's final oral defense.

The PhD final oral defense is scheduled by the student and his/her defense at a time convenient to all. All departmental faculty are invited to participate in the final oral defense.

All of the above evaluations are taking place continuously throughout the year for many different students, major professors, and committees. The department uses information gained from these exams and written dissertations to make improvements in ourPhD program that will improve student learning.

3. *The department administers its doctoral Qualifying Exam every January and June for students wishing to be admitted into the PhD program. The Qualifying Examination is written by a Qualifying Exam Committee. The Qualifying Exam Committee has each question on the exam graded by at least two faculty members. The Qualifying Exam Committee reports the results to the graduate faculty, and the graduate faculty makes a decision as to whether a student passes the exam, fails the exam with a chance for a retake, or fails the exam with no chance for a retake. The information gained by the department in this process is used to strengthen our program in areas where students may do badly. Those who pass the exam are admitted into the PhD program.*

4. *The Statistics Department has a Graduate Student Progress Committee that monitors each student's progress towards the PhD degree. The Committee provides feedback to the Department Head who then meets with each student in order to provide feedback as to their progress towards the PhD degree. The Graduate Progress Committee provides a report each semester. It monitors such things as each student's progress, whether the student has obtained a Major Professor, whether the student has formed a Graduate Committee, whether the student has filed a "Program of Study", and whether the student is maintaining an appropriate grade point average.*

5. *Each student is expected to have statistical consulting experience. Such experience is usually obtained before a student is admitted to the PhD program. Students are evaluated by having the student present a short seminar about his/her consulting experience. All faculty and all other graduate students are invited to attend these seminars. Students are asked questions about their consulting experience and the recommendations that they have made to their client(s). Each student is required to present such a seminar at least one time during the course of study towards the PhD degree.*

6. *Feedback from prior graduates is often obtained. We surveyed past graduates a few years ago, and have plans to do another survey in the future. We also obtain information from previous graduates in an informal manner. At the annual Joint Statistics Meetings, the K-State Statistics Department puts on a K-State dinner where all students, both current students and past graduates, faculty both current and past, and friends of the department are invited to attend. At such informal gatherings, we are able to learn about those things we are doing well and those things that need improvement. Many of our current and past graduates presenting papers at professional conferences and feedback is gained from other statisticians throughout the country.*

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

As noted above, improvement of student learning has been and continues to be a continuously ongoing process. The Graduate Faculty of the department is continuously looking for ways to improve the PhD degree in Statistics program. The department's faculty meet on the first and third Tuesday of every month where all aspects of the department's programs in statistics are discussed and assessed. The process of using assessment results to improve student learning is usually initiated by one or more members of the faculty. A proposal will be submitted for the department's consideration. After several amendments and iterations, the proposal will either be accepted by the faculty or rejected by the faculty. Proposals that improve student learning are

almost always accepted. Since we are a small department, it is not unusual for this process to take place several times during each academic year.