Undergraduate Academic Assessment Plan 2012-2013

Statistics

College of Liberal Arts and Sciences

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Statistics – College of Liberal Arts and Sciences Undergraduate Academic Assessment Plan

Mission Statement

The mission of the undergraduate major in statistics is to provide its students with a fundamental understanding of statistical reasoning and methodology, and to train them to apply this knowledge to the collection and analysis of data. The undergraduate major in statistics thus supports the missions of the College of Liberal Arts and Sciences and the University of Florida by preparing its students for careers in a highly technological society in which science and decision-making are increasingly driven by a rapid expansion in the quantity and availability of data.

Student Learning Outcomes (SLOs)

The SLO's for statistics were developed on the principle that all statistics majors should have a strong fundamental knowledge of applied statistics. They should know how to translate data into information that is useful to the issue under investigation.

Content Knowledge

1. Identify, define and describe concepts and issues in statistics, including those involved in designing a statistical study, in statistical estimation, and in tests of hypotheses.

Critical Thinking

2. Identify sources of variability in a given problem setting and formulate an appropriate statistical analysis.

Communication

3. Clearly and effectively present ideas in speech and in writing concerning statistical issues and analyses of data.

Curriculum Map

Curriculum Map for:

Statistics College of Liberal Arts and Sciences

Key: **I**ntroduced **R**einforced **A**ssessed

Courses SLOs	STA4210	STA4211	STA4321	STA4322	STA4504	STA4502	STA4222	STA4702	STA4712	STA4853
Content Knowledge										
#1	I	A Written Exam	I	I	R	R	R	R	R	R
Critical Thinking										
#2	I	A Data Analysis Project			R	R	R	R	R	R
Communication										
#3	I	A Written and oral presentation of project			R	R	R	R	R	R

Assessment Cycle

Assessment Cycle Chart

Assessment Cycle for:

Statistics College of Liberal Arts and Sciences

Analysis and Interpretation: End of April
Improvement Actions: Completed by Mid-August
Dissemination: Completed by End of September

Year / SLOs	10-11	11-12	12-13	13-14	14-15	15-16
Content Knowledge						
#1	x	x	x	x	x	x
Critical Thinking						
#2	x	x	x	x	x	x
Communication						
#3	x	x	x	x	x	x

Methods and Procedures

SLO Assessment Matrix

2012-13 Student Learning Outcome	Assessment Method	Measurement Procedure
Identify, define, and describe concepts and issues in statistics, including those involved in designing a statistical study, in statistical estimation, and in tests of hypotheses.	Written Exam	The exam is a 20 question multiple choice exam that tests their understanding of fundamentals in applied statistics
Identify sources of variability in a given problem setting and formulate an appropriate statistical analysis.	Data Analysis Project	Graded using a rubric created by the department's undergraduate program committee.
Clearly and effectively present ideas in speech and in writing concerning statistical issues and analyses of data.	Written and oral presentation of data analysis project	Graded using a rubric created by the department's undergraduate program committee.

The undergraduate majors are achieving the expected learning outcomes as measured by their ability to conduct a study, to write a report on their statistical analysis and to present their results orally and their success on a written exam. Details follow.

- Correctly answer at least 14 of 20 (70%) multiple choice questions covering the fundamentals of applied statistics in STA 4211, the conclusion of the applied statistics course sequence. Sample exam is attached.

- Satisfactory completion of a data analysis project in STA 4211. Students are required to conduct their own experiment to address an issue of interest to them. They design and carry out the study and analyze the data. Each student must submit a written report on their individual experiment and must also present their findings in an oral presentation to the whole class.
    - The written report and the oral presentation are graded via a rubric created by the Department's Undergraduate Program Committee (attached).

The program is assessed annually (at the end of the spring semester) using the following methods:

- Direct Assessment of the students' performance in STA 4211 (the capstone course) and students' placement in top graduate programs

- Indirect Assessment: Survey of the undergraduate majors at the end of STA 4211 concerning

their experiences in the major and any suggestions they might make toward improving the major.

The Undergraduate Program Committee reviews these results after the spring semester assessing whether the students are performing well, whether the assessment measures are adequate and whether changes should be implemented in the undergraduate program or the assessment instruments. Recent additions to the program include re-starting the Statistics Club and the Mu Sigma Rho honor society.

Assessment Oversight

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