



SAINT LOUIS
UNIVERSITY
Saint Louis University
Program Assessment Plan

Program (Major, Minor, Core): BS Biostatistics

Department: Biostatistics

Person(s) Responsible for Implementing the Plan: Lauren Arnold/Darcy Scharff

Original Date Submitted: 1/3/16

Revised Date: June 2017

Note: The Biostatistics major will graduate its first students in May 2018. The Biostatistics Department will be discussing in Spring 2016 whether a capstone project will be incorporated into BST4400 or be a stand-alone requirement. Once that is determined, the direct measures/ assessment plan will be developed.

Program Learning Outcomes	Curriculum Mapping	Assessment Methods	Use of Assessment Data
<i>What do you expect all students who complete the program to know, or be able to do?</i>	<i>Where is the outcome learned/assessed (courses, internships, student teaching, clinical, etc.)?</i>	<i>How do students demonstrate their performance of the program learning outcomes? How does the program measure student performance? Distinguish your direct measures from indirect measures.</i>	<i>How does the program use assessment results to recognize success and "close the loop" to inform additional program improvement? How/when is this data shared, and with whom?</i>
BSBS 1: Perform computations, derivations and calculations as they relate to calculus and linear algebra.	Courses that cover this learning outcome: See course by learning outcome matrix attached	<u>Direct measures:</u> To be determined <u>Indirect Measures:</u>	<u>Direct:</u> To be determined
BSBS 2. Use standard statistical software to create and manage datasets and perform basic statistical tests.	Courses that will be used in the direct assessment: Most likely BST4400	Annual Exit Survey: Assess satisfaction with program including use of resources, mentor and advisor relationships, CPHSJ undergraduate experience, and post-graduation plans	<u>Indirect:</u> Data from the exit and alumni surveys will be reviewed annually and shared with the Biostatistics Department and Undergraduate Steering Committee, which make recommendations for program changes.
BSBS 3. Appropriately communicate statistical results.		Alumni Survey: Assess alumni comfort level with performing the	

BSBS 4. Apply the public health model to biostatistical work.

program learning outcomes as well as post-graduation placement

It is **not recommended** to try and assess (in depth) all of the program learning outcomes every semester. It is best practice to plan out when each outcome will be assessed and focus on 1 or 2 each semester/academic year. Describe the responsibilities, timeline, and the process for implementing this assessment plan.

Responsibility	Timeline	Process
Program Director/ Associate Dean for Academic Affairs: organized the assessment	2016-2017	<p>Biostatistics Department will develop a plan for a capstone project, likely incorporated into BST4400. This will serve as a direct method of assessment and will be submitted to the Undergraduate Public Health Program Director for feedback.</p> <p>Direct and indirect curriculum review of ITM core requirements via assessment of double majors/minors in computer science (direct) and student feedback (indirect).</p>
	Fall 2016	<i>Direct Assessment:</i> Data collection for assessment of LO3 in BST3100-Applied Biostatistics I. (Note: Fall 2016 is the first time this course is offered.)
	Spring 2017	<i>Direct Assessment:</i> Analysis of LO3 data from BST3100.
	Fall 2017/Spring 2018	<i>Direct Assessment:</i> Re-assessment of LO3 using data from BST3100 and at least one other course in the BST major.
	Spring 2018	<p><i>Indirect assessment:</i> First cohort completes graduation exit survey.</p> <p><i>Direct Assessment:</i> Students in BST4400 complete the capstone project, which maps to LOs 1-4.</p>
	Fall 2018	<p><i>Direct Assessment:</i> Identify a sample of capstone projects from low, moderately, and high performing BST4400 students. Assess LO1 & LO2 using data from at least one course in the BST major.</p> <p><i>Indirect assessment:</i> Review graduation exit survey and identify LOs for which more than 20% of respondents indicate rating lower than "agree" (4.0 / 5.0).</p> <p>Report findings from assessment of the Spring 2018 capstone project to the Epidemiology/Biostatistics Department and PH Undergraduate Steering Committee. Based on findings, make recommendations for program changes and identify LOs to assess in Spring 2019.</p>
	Spring 2019	<p><i>Direct assessment:</i> Assess problematic LOs (see Fall 2018) using data from at least one course in the BST major. Students complete capstone project in BST4400.</p> <p><i>Indirect assessment:</i> Graduation exit survey and first alumni survey.</p>

	Fall 2019	<i>Direct and indirect:</i> Repeat Fall 2018 process (capstone, survey data).
	Spring 2020	<i>Direct assessment:</i> Repeat Spring 2019 process. <i>Indirect assessment:</i> Graduation exit and alumni surveys given.
	Fall 2020	Repeat Fall 2019 process.
	Spring 2021	Repeat Spring 2020 process.

1. Please explain how these assessment efforts are coordinated with Madrid (courses and/or program)?

These efforts are not coordinated with Madrid as Madrid does not offer BST courses.

2. The program assessment plan should be developed and approved by all faculty in the department. In addition, the program assessment plan should be developed to include student input and external sources (e.g., national standards, advisory boards, employers, alumni, etc.). Describe the process through which your academic unit created this assessment plan. Include the following:

- a. Timeline regarding when or how often this plan will be reviewed and revised. (This could be aligned with program review.)
See table above that outlines the timeline. The Undergraduate Steering Committee and Epidemiology/Biostatistics Department will review this proposed plan in fall 2017 and determine if any timeline modifications are needed.
- b. How students were included in the process and/or how student input was gathered and incorporated into the assessment plan.
Students are incorporated into the assessment plan as students will complete a capstone project to be used in direct assessment. Students also complete surveys for indirect assessment.
- c. What external sources were consulted in the development of this assessment plan?
CEPH guidelines/requirements and University assessment strategies for undergraduate program assessment were consulted for development of the assessment plan.
- d. Assessment of the manageability of the plan in relation to departmental resources and personnel
This will be a lot of work that will fall on the program director, ADAA, and faculty and will require a lot of education and increasing buy-in. In addition to these individuals and the Steering Committee, program coordinator and GAs will contribute to management of the plan.