

Biostatistics & Data Science

Learning Assessment Worksheet

1. Please describe your program's specific learning goals (list as many as appropriate; use 1-2 sentences to describe each):

Goals of the Graduate Program in Biostatistics & Data Science

To produce trainees who are:

a. Able to demonstrate understanding of central statistical concepts, apply appropriate statistical methods to research questions and use appropriate software to produce reproducible results.

b. Able to manipulate, organize and visualize complex messy data efficiently and effectively and execute best practices for reproducible research as well as best coding practices.

c. Able to understand data generating processes, pros and cons of different study designs, bias and confounding and proficiency in critically reviewing and evaluating a study.

d. Able to understand the goals of a research problem, apply appropriate method to predict outcomes and establish causal effects of outcomes using appropriate advanced statistical and machine learning methods.

e. Able to develop and succeed in cross-disciplinary teams to pursue common projects.

f. Aware of issues and best practices in the responsible conduct of research and human subjects research.

g. Able to present data and its analysis in a public forum, orally and in writing.

2. Does your program have a process in place to assess whether the students meet the defined learning goals? If so, please describe this learning assessment process, including who is involved, frequency of the assessment, and how the information is used:

Our learning assessment is comprised of successful completion of coursework, written exams, and papers within 1-2 years in the program. All students defend a final presentation of Capstone Project findings to Program Directors in the final term of studies. Program Directors and staff review student academic status at the end of every term to determine satisfactory academic progress is being met and that the defined learning goals are being reached. The education curriculum committee conducts a final audit of the student at the end of the final term to confirm that all requirements have been met before the Master's degree is awarded.

3. Does your program currently systematically collect, store, and/or use for learning assessment at the program level any of the following outcome measures:

	Collect systematically (Y/N)	Electronically or paper stored (E/P)	Use for learning assessment (Y/N)
Direct measures:			
• Results of exams/tests for individual courses	Y	E	Y
• Number of student publications and abstracts	Y	E	Y
• Quality of students'	Y	P	Y

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presentation skills			
• Program metrics (eg, time to degree, completion rates)	Y	E	Program assessment, Y
• Other (please describe):			
Indirect measures:			
• Student feedback			
○ Student surveys	Y	E	Y
○ Focus groups	N	N	N
○ Exit interviews	Y	E	Y
• Alumni survey	Y	E	Y
• Career tracking	Y	E	Y
• Other (please describe):			

4. Does your program regularly review and adjust (1) the program's specific learning goals, and/or (2) the manner in which outcomes are measured and how the information is used? If so, please describe how this is done:

1. Informal discussions throughout the year with departmental faculty. These discussions typically involve how to achieve the learning goals, especially keeping the course topics and material current and course resources up to date.

2. Annual meetings are held via the Curriculum Committee Meeting to track student progress and quality of Biostatistics & Data Science courses.