



Data Science | 2016-2017 Assessment Plan

1. Please review last year's assessment results (2015-2016) as well as the Academic Program Assessment Report with the faculty in your program. How does your program plan to take these results into consideration in future programmatic planning?

Based on the input from last year's assessment data we have revised our plan. This year we are planning to assess all the learning outcomes as mentioned in Appendix A and B.

2. Please review your program's Learning Outcomes. Do any of them need to be updated or clarified?
 - a. Please provide brief indications of the kinds of assessment that might be used to assess each outcome.

We will be using some direct methods such as tests, papers, case studies, and embedded assessments.

- b. Please compare your Learning Outcomes to the University's main learning objectives. Which programmatic outcomes match university mission outcomes?

The spirit of our program aligns very well with the UWGB's mission of interdisciplinarity. The program level learning goal "F" (Students will be able to...value and safeguard the ethical use of data in all aspects of their profession) reflects the UWGB's mission of citizenship. All the program level learning goals (particularly, A and C) are geared towards critical thinking, which is an UWGB mission as well.

3. Which outcome will you assess this year (2016-2017)?

We are planning to assess all the learning outcomes this year. Please see appendix A.

4. Which technique will you use to assess this outcome?

We will be using some direct methods such as tests, papers, case studies, and embedded assessments.

5. Which course or group of students will you assess on the outcome chosen above and when?

For the year 2016-2017 we plan on assessing all of the students. Please refer to Appendix B for our program learning outcomes and course mapping matrix.

Appendix A

Program Learning Goals

1. Students will be able to...identify and assess the needs of an organization for a data science task.
 - a. Students will be able to conduct a needs assessment.
 - b. Students will be able to frame tasks in the context of organizational goals.
 - c. Students will be able to communicate data science options and limitations that could meet organizational needs.
2. Students will be able to collect and manage data to devise solutions to data science tasks.
 - a. Students will be able to collect, clean, and prepare data.
 - b. Students will be able to evaluate data in terms of source, volume, frequency, and flow.
3. Students will be able to...select, apply, and evaluate models to devise solutions to data science tasks.
 - a. Students will be able to identify and classify relevant variables for data science tasks.
 - b. Students will be able to choose and apply tools and methodologies to solve data science tasks.
 - c. Students will be able to assess the model used to solve data science tasks.
4. Students will be able to...interpret data science analysis outcomes.
 - a. Students will be able to interpret data, extract meaningful information, and assess findings.
 - b. Students will be able to evaluate the limitations of data science findings.
5. Students will be able to ...effectively communicate data science related information effectively in various formats to appropriate audiences.
 - a. Students will be able to write, format, disseminate, and orally communicate technical materials.
 - b. Students will be able to help non-technical professionals visualize, explore, and act on data science findings.
 - c. Students will be able to facilitate data-informed discussions through listening, questioning, and presenting.
6. Students will be able to...value and safeguard the ethical use of data in all aspects of their profession.
 - a. Students will be able to identify and analyze social, legal, and ethical issues in data science.

- b. Students will be able to interpret and apply a professional code of ethics relevant to the data science profession.
 - c. Students will be able to interpret the activities and choices of others within an ethical framework and determine an appropriate action based on standards of professional conduct.
- 7. Students will be able to... transform findings from data resources into actionable business strategies.
 - a. Students will be able integrate data science capabilities into the formation of a situation analysis.
 - b. Students will be able to explain how data assets can be used to develop competitive advantage.
 - c. Students will be able to identify and appraise the leadership and management skills required to direct a team of data science professionals toward meeting organizational goals.

