

**MS in Data Science and Business Analytics (MSDSBA)
Program Assessment Report for AY 2018-2019**

Assessment Committee

Name	Title	College/School
Dr. Ratna Babu Chinnam	Director, Advanced Analytics Track Professor, Industrial & Systems Engineering	College of Engineering (IE)
Dr. Ming Dong	Director, Data Computing Track Professor, Computer Science	College of Engineering (CSC)
Dr. Toni Somers	Director, Data-Driven Business Track Associate Dean Professor of Information Systems Mgt	Ilitch School of Business
Kiantee-Rupert Jones	Assistant Dean, Graduate Programs	Ilitch School of Business
Nikki Taylor-Vargo	MSDSBA Program Manager	College of Engineering

Dear MSDSBA Program Stakeholders:

In our mission to continuously improve the MSDSBA program for our students, the MSDSBA leadership team has dedicated time and effort to understanding our students' performance across the entire program. For the AY 2018-2019 assessment cycle, the MSDSBA leadership team collected data on two program learning outcomes for the MSDSBA program:

1. (PLO1) Students will be able to produce accurate and timely insights from large quantities of data using data science and analytics techniques.
2. (PLO5) Students collaborate productively with others to accomplish established goals.

The data used to assess the accomplishments of students in the MSDSBA program was derived from homework assignments, exams, quizzes, projects, presentations, papers, etc. that were assigned to students in courses which Introduction, Development, and Mastery of the outcomes was expected. The data gathered was part of the normal class requirements. Faculty used course learning outcomes grading rubrics to assess student performance on assignments. The analysis of the resultant data produced the following observations with regard to each of the program-learning outcomes mentioned above:

1. (PLO1) This outcome was assessed using the results from DSB 6000 (Data Science Strategy & Leadership) in Fall 2018. One hundred percent of the students enrolled in the course received a score of 5.0. This met the standard for the program, which was set at 5.0.

While the standard for the program was met, there was a clear lack of variability in the scoring of the student assignment were attributed to:

- This was a team project
- Limited variability in grading at the graduate level

- No peer evaluations
- Inability to provide grading rubric to instructor prior to start of the course

The MSDSBA leadership team has decided to implement the following plan of action immediately and apply it to DSB 6000 course in fall 2019 and winter 2020:

- Access critical thinking on both group and individual assignments
- Provide faculty/student with grading rubric prior to the start of class
- Implement peer evaluations for the course project

2. (PLO5) This outcome was assessed using the project peer evaluation results from DSA/DSB/DSE 7500 (Practicum) in Spring/Summer 2018. Sixty-six percent of the students enrolled in the course received a score of 4.0. However, 33% of the students enrolled in the course received a score of less than 4.0. The overall 3.8 average for the course approaches the standard for the program, which was set at 4.0.

Failure to meet the program expectations in the spring/summer 2018 term were attributed to:

- Small sample size (six students)
- Not everyone completed a peer review
- Scale did not provide opportunity for enough variability

The MSDSBA leadership team has decided to implement the following plan of action immediately and apply it to the DSA/DSB/DSE 7500 course in spring/summer 2020:

- Make the project peer evaluation a requirement of the course
- Increase the sample size (will naturally increase as enrollment continues to grow)
- Change the rubric rating scale from 1, 2, 3, and 4 to 1, 3, 5, and 7
- Change score for meeting program learning outcome from 4.0 to 6.0

In summary, two key issues for improvement were identified in the current assessment period:

1. First, rubrics used to assess outcomes need to include enough variability in the scale to provide useful insights.
2. As we approach the second assessment cycle, we need to incorporate data from more than one course and/or assignment so that we have a sufficient sample size for assessment.

Action plans were put in place by Fall 2019 to support these initiatives.

With great appreciation for our students and our program's supporters,

The MSDSBA Assessment Committee