

**Assurance of Student Learning  
2018-2019**

Gordon Ford College of Business

Information Systems

Business Data Analytics 504#

**Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages.**

**Student Learning Outcome 1: Model and computationally analyze business-oriented data**

**Instrument 1** In-class examinations and projects

**Instrument 2** Analysis of Capstone Projects / Poster presentations

**Instrument 3**

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.

**Met**

**Not Met**

**Student Learning Outcome 2: Critically identify appropriate data models to solve business problems**

**Instrument 1** In-class examinations and projects

**Instrument 2** Analysis of Capstone Projects / Poster presentations

**Instrument 3**

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.

**Met**

**Not Met**

**Student Learning Outcome 3: Understand how to present and communicate graphical information related to various data analytic models**

**Instrument 1** In-class examinations and projects

**Instrument 2** Analysis of Capstone Projects / Poster presentations

**Instrument 3**

Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.

**Met**

**Not Met**

**Program Summary (Briefly summarize the action and follow up items from your detailed responses on subsequent pages.)**

A "best example" of how findings improved the program was requiring the students to develop a shorter "elevator speech" for their presentations and be able to communicate the major points and outcomes of their project in three minutes or less. Faculty evaluations from the previous year indicated students needed to be more succinct with their poster presentations.

Annual review of the curriculum resulted in a redesign of BDAN 310 and BDAN 330 courses. The number of hands-on projects will be increased in BDAN 310 and more emphasis on Structured Query Language (SQL) will be done in BDAN 330.

**Student Learning Outcome 1**

<b>Student Learning Outcome</b>	<b>Model and computationally analyze business-oriented data</b>		
<b>Measurement Instrument 1</b>	<p><b>NOTE: Each student learning outcome should have at least one direct measure of student learning. Indirect measures are not required.</b></p> <p>Direct measures of student learning. Students were given a final and written projects that required them to synthesize their work in the program's core courses.</p>		
<b>Criteria for Student Success</b>	<p>Describe what outcomes or achievements should be reached for a student to have "succeeded" using the instrument above. Please attach rubric.</p> <p>Students at the end of the program should be able to create an analytical model to solve a current business problem.</p>		
<b>Program Success Target for this Measurement</b>	90% of the students will be proficient in their ability to analyze data	<b>Percent of Program Achieving Target</b>	95%
<b>Methods</b>	<p>Students were given projects to analyze in the following courses:</p> <p>CIS 243 Principles of Management Information Systems            BDAN 310 - Business Data Analytics            BDAN 330 - Structured Data Analysis            BDAN 410 - Decision Support Systems Analysis and Design            BDAN 420 - Data Mining            BDAN 430 - Data Visualization and Digital Dashboards</p> <p>A detailed grading rubric was used for a final presentation in BDAN 420.            A detailed grading rubric for the final project was used for BDAN 430.</p>		
<b>Measurement Instrument 2</b>	<b>Analysis of Capstone Projects / Poster presentations</b>		
<b>Criteria for Student Success</b>	<b>Students will develop practical presentations to demonstrate the selection of adequate solutions to specific business problems.</b>		
<b>Program Success Target for this Measurement</b>	90% of the students will be proficient in their ability to present their data analytic findings.	<b>Percent of Program Achieving Target</b>	<b>95%</b>

<b>Methods</b>	<p>Students presented the analysis of their projects in the following courses:  BDAN 420 - Data Mining  BDAN 430 - Data Visualization and Digital Dashboards</p> <p>A detailed grading rubric was used for a final presentation in BDAN 420.  A detailed grading rubric for the final project was used for BDAN 430.</p>		
<b>Measurement Instrument 3</b>			
<b>Criteria for Student Success</b>			
<b>Program Success Target for this Measurement</b>		<b>Percent of Program Achieving Target</b>	
<b>Methods</b>			
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 1.</b>		<b>Met</b>	<b>Not Met</b>
<b>Actions</b> (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)			
<b>Based on feedback from the final projects and exams in each of the core classes, the following changes occurred.</b>			
BDAN 310, Business Data Analytics was redesigned to give students more hands-on data analytics projects. Implementation began in Fall 2019. BDAN 330, Structured Data Analysis will begin using more SQL in the course to give students more exposure to Structured Query Language. This is scheduled to begin in Spring 2020.			
<b>Follow-Up</b> (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
The department evaluates all the major and service courses each year for student and market relevance. Examples of changes brought about by these discussions are listed in the "Actions" section.			

## Student Learning Outcome 2

<b>Student Learning Outcome</b>	<b>Critically identify appropriate data models to solve business problems</b>		
<b>Measurement Instrument 1</b>	<p><b>NOTE: Each student learning outcome should have at least one direct measure of student learning. Indirect measures are not required.</b>  <b>In-class examinations and projects</b></p> <p>Direct measures of student learning. Students were given a final and written projects that required them to synthesize their work in the program's core courses.</p>		
<b>Criteria for Student Success</b>	Students will convert data modeling results into insights that are useful in making decisions.		
<b>Program Success Target for this Measurement</b>	90%	<b>Percent of Program Achieving Target</b>	95%
<b>Methods</b>	<p>Students were given projects to analyze in the following courses:</p> <p>CIS 243 Principles of Management Information Systems            BDAN 310 - Business Data Analytics            BDAN 330 - Structured Data Analysis            BDAN 410 - Decision Support Systems Analysis and Design            BDAN 420 - Data Mining            BDAN 430 - Data Visualization and Digital Dashboards</p> <p>A detailed grading rubric was used for a final presentation in BDAN 420.            A detailed grading rubric for the final project was used for BDAN 430.</p>		
<b>Measurement Instrument 2</b>	<b>Analysis of Capstone Projects / Poster presentations</b>		
<b>Criteria for Student Success</b>	<b>Students will be able to explain their data modeling results and give insights about the interpretation of the data.</b>		
<b>Program Success Target for this Measurement</b>	90%	<b>Percent of Program Achieving Target</b>	95%
<b>Methods</b>	<p>Students presented the analysis of their projects in the following courses:</p> <p>BDAN 420 - Data Mining            BDAN 430 - Data Visualization and Digital Dashboards</p> <p>A detailed grading rubric was used for a final presentation in BDAN 420.            A detailed grading rubric for the final project was used for BDAN 430.</p>		
<b>Measurement Instrument 3</b>			

<b>Criteria for Student Success</b>			
<b>Program Success Target for this Measurement</b>		<b>Percent of Program Achieving Target</b>	
<b>Methods</b>			
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.</b>			<b>Met</b>
<b>Met</b>			<b>Not Met</b>
<b>Actions</b> (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)			
<b>Based on feedback from the final projects and exams in each of the core classes the following changes occurred.</b>			
BDAN 310, Business Data Analytics was redesigned to give more students more hands-on data analytics projects. Implementation began in Fall 2019. BDAN 330. Structured Data Analysis will begin emphasizing more SQL in the course to give students more exposure to Structured Query Language. This is scheduled to begin in Spring 2020.			
<b>Follow-Up</b> (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
The department evaluates all the major and service courses each year for student and market relevance. Examples of changes brought about by these discussions are listed in the "Actions" section.			

<b>Student Learning Outcome 3</b>			
<b>Student Learning Outcome</b>	<b>Understand how to present and communicate graphical information related to various data analytic models</b>		
<b>Measurement Instrument 1</b>	<p><b>NOTE: Each student learning outcome should have at least one direct measure of student learning. Indirect measures are not required.</b></p> <p>Direct measures of student learning. Students were given a final and written projects that required them to synthesize their work in the program's core courses.</p> <p>The faculty also participated in evaluating the student poster presentations. Discussions and a grading rubric for student presentations were used to provide feedback to the students and the instructor for future improvements.</p>		
<b>Criteria for Student Success</b>	Students will be able to present and explain their results using various analytical tools.		
<b>Program Success Target for this Measurement</b>	90%	<b>Percent of Program Achieving Target</b>	95%
<b>Methods</b>	Students were required to present their research findings in a poster presentation in BDAN 420, Data Mining, and develop data visualization results in BDAN 430, Data Visualization and Digital Dashboards		

	A detailed grading rubric was used for a final presentation in BDAN 420. A detailed grading rubric for the final project was used for BDAN 430.		
<b>Measurement Instrument 2</b>	<b>Analysis of Capstone Projects / Poster presentations</b>		
<b>Criteria for Student Success</b>	Students will be able to present and explain their model results in a research forum.		
<b>Program Success Target for this Measurement</b>	<b>90%</b>	<b>Percent of Program Achieving Target</b>	<b>95%</b>
<b>Methods</b>	Students were required to present their research findings in a poster presentation in BDAN 420, Data Mining and develop data visualization results in BDAN 430, Data Visualization and Digital Dashboards  A detailed grading rubric was used for a final presentation in BDAN 420. A detailed grading rubric for the final project was used for BDAN 430.		
<b>Measurement Instrument 3</b>			
<b>Criteria for Student Success</b>			
<b>Program Success Target for this Measurement</b>		<b>Percent of Program Achieving Target</b>	
<b>Methods</b>			
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.</b>			<b>Met</b>
<b>Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.</b>			<b>Not Met</b>
<b>Actions</b> (Describe the decision-making process and actions planned for program improvement. The actions should include a timeline.)			
Based on feedback from the poster presentation, a “Pitch” presentation rubric was developed for BDAN 420, Data Mining.			
<b>Follow-Up</b> (Provide your timeline for follow-up. If follow-up has occurred, describe how the actions above have resulted in program improvement.)			
Follow-up will occur when the next poster presentation happens for the BDAN 420 course, Fall 2020.			