

<b>Assurance of Student Learning Report 2023-2024</b>	
Gordon Ford College of Business	Analytics & Information Systems
Business Data Analytics 504#	
Assessment Coordinator: Ray Blankenship	
<b>Is this an online program?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Please make sure the Program Learning Outcomes listed match those in CourseLeaf . Indicate verification here <input checked="" type="checkbox"/> Yes, they match! (If they don't match, explain on this page under <b>Assessment Cycle</b> )

**\*\*\* Please include Curriculum Map as part of this document (at the end), NOT as a separate file.**

<i>Use this page to list learning outcomes, measurements, and summarize results for your program. Detailed information must be completed in the subsequent pages. Add more Outcomes as needed.</i>				
<b>Program Student Learning Outcome 1: Model and computationally analyze business-oriented data</b>				
<b>Instrument 1</b>	In-class examinations and projects. Analysis of Capstone Projects / Poster presentations.			
<b>Instrument 2</b>				
<b>Instrument 3</b>				
Based on your results, check whether the program met the goal Student Learning Outcome 1.			<input checked="" type="checkbox"/> <b>Met</b>	<input type="checkbox"/> <b>Not Met</b>
<b>Program Student Learning Outcome 2:</b>				
Identify appropriate data structures to solve business problems				
<b>Instrument 1</b>	In-class examinations and projects. Analysis of Capstone Projects / Poster presentations.			
<b>Instrument 2</b>				
<b>Instrument 3</b>				
Based on your results, check whether the program met the goal Student Learning Outcome 2.			<input checked="" type="checkbox"/> <b>Met</b>	<input type="checkbox"/> <b>Not Met</b>
<b>Program Student Learning Outcome 3:</b>				
Present and communicate graphical information related to various data analytic models				
<b>Instrument 1</b>	In-class examinations and projects. Analysis of Capstone Projects / Poster presentations.			
<b>Instrument 2</b>				
<b>Instrument 3</b>				
Based on your results, check whether the program met the goal Student Learning Outcome 3.			<input checked="" type="checkbox"/> <b>Met</b>	<input type="checkbox"/> <b>Not Met</b>
<b>Assessment Cycle Plan:</b>				

New rubrics were developed and used to assess each of the learning outcomes. Video Presentations from BDAN 420 were analyzed. Results will be discussed with the faculty at the beginning of the fall to determine what areas of improvement should be considered.

Program Student Learning Outcome 1			
Program Student Learning Outcome	Model and computationally analyze business-oriented data		
Measurement Instrument 1	<p><b>NOTE: Each student learning outcome should have <u>at least one direct measure of student learning</u>. Indirect measures are not required.</b></p> <p>Be specific and include how the measurement aligns with your learning outcome.</p> <p>Consider the following list of example sources for DIRECT measures of student learning: written work, presentations, licensure/national board exams, juried performances, oral exams/presentations, capstone course artifact, portfolios, senior exam results, nationally-normed exams or boards, graduate written exams, thesis defense, simulations, e-portfolios, ratings of students by faculty field-experience supervisors. <b><u>Please attach any/all rubrics used.</u></b> Consider the following list of example sources for INDIRECT measures of student learning: student surveys, alumni surveys, employer surveys, graduate school placement and success rates, employer internship performance appraisals, written surveys and questionnaires, external examiner, external advisory boards, focus groups, exit interviews. Again, these are not required.</p>		
Criteria for Student Success	Students at the end of the program should be able to create an analytical model to solve a current business problem.		
Program Success Target for this Measurement	Students will score a 70% or higher for this SLO.	Percent of Program Achieving Target	<p>80.21 % was the actual Median Score for the students evaluated in the BDAN 420 course.</p> <p>75% was the actual median score in the BDAN 310 course.</p>
Methods	Data was captured in BDAN 420. The data was video presentations, which allowed for the assessment of each learning outcome. <b>Data was also collected in BDAN 310. The data was in the form of video presentations.</b>		
Measurement Instrument 2	Do you have other measures of assessment for SLO 1? If so, please add those here along with all the information below. If not, you may delete this section and move on to <b>“... whether the program met the goal Student Learning Outcome 1.”</b>		
Criteria for Student Success			
Program Success Target for this Measurement		Percent of Program Achieving Target	
Methods			
Measurement Instrument 3	Do you have other measures of assessment for SLO 1? If so, please add those here along with all the information below. If not, you may		

	delete this section and move on to “... whether the program met the goal Student Learning Outcome 1.”		
Criteria for Student Success			
Program Success Target for this Measurement		Percent of Program Achieving Target	
Methods	<p>Students were given projects to analyze in the following courses:</p> <p>BDAN 310 - Business Data Analytics BDAN 420 - Data Mining</p> <p style="text-align: right;">Those summary presentations for BDAN 420 and BDAN 310 are attached.</p>		
Based on your results, highlight whether the program met the goal Student Learning Outcome 1.		<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
<b>Results, Conclusion, and Plans for Next Assessment Cycle (Describe what worked, what didn't, and plan going forward)</b>			
<p><u>Results:</u> The results are as expected from the BDAN 420 course. The results from the BDAN 310 course are lower than expected. This may be due to using a new rubric and the level of knowledge students have in each of the classes. Students in the BDAN 420 course scored 3.43 out of 4 for this SLO.</p> <p><u>Conclusions:</u> Results will be discussed with the faculty along with a more in-depth evaluation of the rubric. Goal expectations and the rubric will be refined this next year.</p> <p><b>**IMPORTANT - Plans for Next Assessment Cycle:</b> Goal expectations and the rubric will be refined this next year.</p>			

Program Student Learning Outcome 2			
Program Student Learning Outcome	Identify appropriate data structures to solve business problems		
Measurement Instrument 1	NOTE: Each student learning outcome should have at least one direct measure of student learning . Indirect measures are not required.		
Criteria for Student Success	Students will convert data modeling results into insights that are useful in making decisions.		
Program Success Target for this Measurement	Students will score a 70% or higher for this SLO.	Percent of Program Achieving Target	The median percent for this SLO was 92% for BDAN 420 students and 90.63% for the BDAN 310 course.
Methods	<p>Students were given projects to analyze in the following courses:</p> <p>BDAN 310 - Business Data Analytics BDAN 420 - Data Mining</p> <p style="text-align: right;">Those summary presentations for BDAN 420 and BDAN 310 are attached.</p>		
Measurement Instrument 2			
Criteria for Student Success			

<b>Program Success Target for this Measurement</b>		<b>Percent of Program Achieving Target</b>	
<b>Methods</b>			
<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>			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 2.		<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
<b>Results, Conclusion, and Plans for Next Assessment Cycle (Describe what worked, what didn't, and plan going forward)</b>			
<p><u>Results:</u> The results are as expected from the BDAN 420 course. The results from the BDAN 310 course are better than expected. This may be due to using a new rubric, and the level of knowledge students have in each of the classes. Students in the BDAN 420 course scored 3.68 out of 4 for this SLO.</p> <p><u>Conclusions:</u> Results will be discussed with the faculty along with a more in-depth evaluation of the rubric. Goal expectations and the rubric will be refined this next year.</p> <p><b>**IMPORTANT - Plans for Next Assessment Cycle:</b> Goal expectations and the rubric will be refined this next year.</p>			

Program Student Learning Outcome 3			
<b>Program Student Learning Outcome</b>	Present and communicate graphical information related to various data analytic models		
<b>Measurement Instrument 1</b>	<b>NOTE: Each student learning outcome should have at least one direct measure of student learning . Indirect measures are not required.</b>		
<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>	Students will achieve of score of 70% or higher for this SLO.	<b>Percent of Program Achieving Target</b>	71% was the median score for the students in BDAN 420.
<b>Methods</b>	Students were given projects to analyze in the following courses:  BDAN 420 - Data Mining  Those summary presentations for BDAN are attached.		
<b>Measurement Instrument 2</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>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>			
Based on your results, circle or highlight whether the program met the goal Student Learning Outcome 3.		<input checked="" type="checkbox"/> <b>Met</b>	<input type="checkbox"/> <b>Not Met</b>
<b>Results, Conclusion, and Plans for Next Assessment Cycle (Describe what worked, what didn't, and plan going forward)</b>			
<u>Results:</u> The results are lower than expected from the BDAN 420 course. This may be due to using a new rubric, and the level of knowledge students have.			
<u>Conclusions:</u> Results will be discussed with the faculty along with a more in-depth evaluation of the rubric. Goal expectations and the rubric will be refined this next year.			
<b>**IMPORTANT - Plans for Next Assessment Cycle:</b> Goal expectations and the rubric will be refined this next year.			

**Curriculum Map Matrix: Business Data Analytics 504#**  
(Where are PLOs Introduced, Developed, and Mastered)?

	<b>BDAN 250</b>	<b>BDAN 305</b>	<b>BDAN 310</b>	<b>BDAN 320</b>	<b>BDAN 330</b>	<b>BDAN 350</b>	<b>BDAN 410</b>	<b>BDAN 420</b>	<b>BDAN 430</b>
<b>PLO 1:</b> Students will demonstrate the ability to computationally analyze business-oriented data.	I,D	I,D	D					M	
<b>PLO 2:</b> Students will demonstrate the ability to critically identify appropriate data structures in a business context.				I,D	I,D	I,D	M		
<b>PLO 3:</b> Students will demonstrate the ability to interpret graphical information related to various data analytics.	I		I,D					D	M

Place an I, D, or M in each cell above to indicate where the program content related to each SLO is introduced (I), developed (D), and/or mastered (M). SLO content may be delivered in more than just six courses as indicated in the above table.

# (AOL) Business Data Analytics Majors

## BDAN 420 Student Video Presentation Grading Rubric

Criteria	4 - Excellent	3 - Good	2 - Fair	1 - Poor
Identify appropriate data structures to solve business problems				
Problem and Data Description	The problem and data are described in an appropriate and sufficient manner.	The problem and data are described, but minor issues may exist or additional clarification may be needed.	Significant issues exist with the business problem and data description.	There is little or no explanation of the problem or the data.
Data Preparation	The data is prepared in an appropriate and sufficient manner.	The data is prepared, but minor issues or additional preparation may be needed.	Significant issues exist with the data preparation.	There is little or no explanation of the data preparation.
Model and computationally analyze business-oriented data				
Modeling	The data modeling used is appropriate and correct for the data and the problem.	The data modeling is appropriate, but minor issues may exist or additional steps may be needed.	The data modeling is appropriate, but significant issues exist or significant steps are omitted.	The data model has little or no relation to the problem being addressed.
Analysis	The data analysis used is appropriate, correct, and sufficient to support the findings.	The data analysis is appropriate, but minor issues may exist or additional information may be needed.	The data analysis is related but not sufficient to support the findings or significant data analysis issues prevent a clear reading of the results.	The data analysis has little or no relation to the topic being explored, and/or data issues make the findings unusable.
Present and communicate graphical information related to various data analytic models				
The visualization is usable and actionable	The visualization is targeted to the audience, the story is evident, and the conclusion or action required is clearly apparent.	There is a clear message or story conveyed, but the action or conclusion to be drawn is not clearly stated or requires interpretation.	The visualization suggests some possibilities but does not lead to clarity of understanding and therefore action is not possible.	No apparent message or relevancy to the user; no actions can be nor should be taken based on the analysis.
Presentation quality	Extremely well-organized. Clear and engaging audio and video. Demonstrates an excellent understanding of the steps involved.	Organized and easy to follow. Clear audio and video. Demonstrates a good understanding of the steps involved.	Somewhat organized, with some difficulty in following. Adequate audio and video. Demonstrates a superficial or vague understanding of the steps involved.	Poorly organized, difficult to follow. Unclear audio or video. Does not demonstrate understanding of the steps involved.

## (AOL) Applied Data Analytics, Certificate

### BDAN 310 Student Video Presentation Grading Rubric

Criteria	4 - Excellent	3 - Good	2 - Fair	1 - Poor
Problem and Data Description	The problem ( <i>2 models for body fat, and 2 models for heart disease</i> ) and the data are described in a clear manner.	The problem and data are described, but minor issues may exist, or additional clarification may be needed.	Significant issues exist with the description of the problem and the data.	There is no explanation of the problem or the data.
Dataset #1: Predicting Body Fat	Two appropriate body fat models were created and used to make predictions. The predictions were appropriately evaluated and clearly explained.	Two appropriate body fat models were created. Predictions were made using both models, but minor issues may exist, or additional clarification may be needed.	One appropriate body fat model was created. The model was used to make predictions.	Models were not created. Predictions were not made.
Dataset #2: Predicting Heart Disease	Two appropriate heart disease models were created and used to make predictions. The predictions were appropriately evaluated and clearly explained.	Two appropriate heart disease models were created. Predictions were made using both models, but minor issues may exist, or additional clarification may be needed.	One appropriate heart disease model was created. The model was used to make predictions.	Models were not created. Predictions were not made.
Communication and Explanation	Extremely well-organized. Clear and engaging audio and video. Demonstrates an excellent understanding of the steps involved.	Organized and easy to follow. Adequate audio and video. Demonstrates a general understanding of the steps involved.	Weakly organized, and difficult to follow. Demonstrates a minimal or vague understanding of the steps involved.	Difficult to follow. Unclear audio or video. Does not demonstrate understanding of the steps involved.

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