

# Annual Assessment Cycle

Fall 2018 - Spring 2019



## Program/Discipline Annual Assessment Plan

*To be completed in Fall or at the beginning of a course-cycle in the case of courses which are only taught in Spring or Summer semesters*

Submission Date: September 10, 2018

<b>Academic Year</b>	2018-2019
<b>Semester</b>	Fall 2018
<b>Assessment Cycle Year</b>	1
<b>Program/Discipline</b>	Data Analytics AS (788)
<b>Initiator(s)</b>	Eric C Darsow (CIT Dept, North)
<b>Date</b>	11 SEP 18

Each program/discipline must perform an assessment of one or more stated objectives related to student learning. Ideally, objectives have been mapped to a General Education Goal to simplify the work for the program/discipline.

This form must be completed as evidence of annual program/discipline assessment which also incorporates measuring proficiencies related to General Education Goals. If more than one degree or certification program has a common objective to be measured, they may utilize a single form.

Programs with more than four program objectives may need to complete two or more forms in some years to remain compliant with Middle States expectations.

<b>Program Objective/Course Rationale</b>	
<b>Program objective to be assessed:</b>	<b>Objective 2:</b> Collect and organize information from many sources
<b>Which General Education Goals are addressed by this program objective?</b>	<b>Technological Competencies:</b> Use digital technology, productivity software, discipline-specific applications, and technology-mediated collaboration tools to complete tasks.  <b>Sub-goal #2.</b> Employ technology resources to conduct research, analyze data, solve problems, synthesize information and inform decision-making
<b>What courses* are mapped to this program objective?</b>	DAT-102, DAT-201, DAT-202, DAT-281
<b>Which courses* are being used for this assessment?</b>	DAT-102: Introduction to data analytics

<b>Rationale for choosing these courses*:</b>	Program 788: Data Analytics AS is in the process of being birthed. As such, out of the several courses mapped to this GE goal and program objective, only DAT-102 is offered in the Fall of 2018.
<b>Semesters in which these courses* are offered:</b>	Not officially determined, but hopefully each term from SP-18 Onward. As such, changes to this course based on the assessment data will hopefully be made in SP19 when DAT-102 is offered again.

\*It is possible that only one course addresses the program objective.

<b>Direct Measurement #1</b>	
<b>What type of measurement will be used to assess student learning?</b>	Student Project
<b>Describe the method of assessment.</b>	<p><b>From Ferris state:</b> For projects, Students conduct activities that result in the creation of a tangible product. These student artifacts may take on a variety of forms</p> <p>Applied to data analytics, the students will be asked to assemble data relevant to a research question of their development from both the US Census and one other, domain-specific source. This data must be cleaned, reduced to relevant variables, and processed using the data analytics cycle.</p>
<b>Explain the threshold or benchmark for indicating student competence.</b>	<p>Individual student competence is marked by achieving a 2 or greater on each rubric row in the attached project assessment rubric. Note that failure to achieve a 2 on any one axis demonstrates failure to meet threshold.</p> <p>In aggregate, success will be defined as 80% of all relevant students achieving proficiency (score 2+ on rubric rows) in the task described in this document.</p> <p>The relevant sampling of students will consist of students who have declared enrollment in program #788 OR students who, during a student interview, express intention to pursue this program.</p>
<b>What is the timeline for completion?</b>	This instrument will be administered during the early November, 2018.

Attach the assessment instrument and/or rubric. - **SEE ATTACHED!!**

<b>Measurement #2</b>	
<b>Is the measurement direct or indirect?</b>	Indirect
<b>What type of measurement will be used to assess student learning?</b>	Student self-reflection
<b>Describe the method of assessment.</b>	Following the completion of the assigned mini-project, students will be asked to thoughtfully complete the project self-reflection form attached.
<b>Explain the threshold or benchmark for indicating student competence.</b>	Student competence will be judged by 100% of students completing the self-reflection and 60% of all completed reflections identifying areas of future growth/exploration about the topic at hand.
<b>What is the timeline for completion?</b>	The reflection instrument will be administered following the completion of the mini-project late November, 2018.

Attach the assessment instrument and/or rubric. **SEE ATTACHED!**



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Fall 2018 - Spring 2019



## Annual Assessment Results & Plan for Improvement

To be completed at the end of Fall or beginning of the next semester in which the given course is taught

Submission Date: January 14, 2019

Results for Direct Measurement #1						
Summary of Results						
How many students participated in the assessment measure?	Total student participants 19	Traditional 19	Hybrid 0	Online 0	Total possible student participants 19	
Did the students meet the proposed threshold or benchmark for competence?	<p><b>No.</b> The proposed benchmark at the student level is achieving a 2 or greater on all rubric rows. Aggregate proficiency is defined as 80% or more of enrolled students in DAT-102 achieve a 2 or greater on ALL rows.</p> <p>The following table summarizes results from the participating students in the course by achievement level by rubric row. Format: (Number of students) Percent of total%</p>					
	<b>Criterion</b>	<b>Advanced (3)</b>	<b>Proficient (2)</b>	<b>Basic / Needs development (1)</b>	<b>Incomplete or unassessable (0)</b>	<b>% of students achieving 2+</b>
	<i>Develop an investigation question to guide data set development</i>	(5) 26.3%	(9) 47.4%	(2)10.5%	(3)15.8%	73%

	<b>Assemble a cleaned set of tables from the US Census that provide contextual data relevant to the research question</b>	(4) 21.1%	(7) 36.8%	(5) 26.3%	(3)15.8%	57%
	<b>Assemble and clean data directly related to the research question from a reliable, domain-specific source</b>	(3) 15.8%	(7) 36.8%	(6) 31.6%	(3)15.8%	52.6%
	<b>Create an analysis plan for synthesizing the information contained in the two data sets</b>	(3) 15.8%	(7) 36.8%	(6) 31.6%	(3)15.8%	52.6%
<b>Discuss any difference in results between modalities (traditional, hybrid, online).</b>	This assessment was administered to only a single, traditional, in-person section. Given the complexity of the subject matter and the newness of this entire curriculum, the Data Analytics program is being designed around traditional course structure.					
<b>Discuss overall strengths and weaknesses of content or course delivery learned from the results of the assessment.</b>	<p><b>Core Strengths:</b> Students in the Data 102 course revealed command of axis 1: developing a compelling inquiry question. Arriving at a pathway of investigation that is meaningful and interesting to the student drives all future analytical work. While our performance on the technical execution of each subsequent step is lacking, the motivational energy exists for ramping up achievement in the weaker areas.</p> <p><b>Core Weaknesses:</b> Student work samples revealed lower-than-expected technical competence with spreadsheet-based data manipulation. Both foundational/conceptual concepts were lacking and experience with the “click-by-click” procedures for data processing.</p>					
<b>Improvement Plan</b>						

<b>What will be done to improve the outcome?</b>	Select a category from the list of CCAC interventions and explain what changes will be implemented to improve student learning. 1. Course Modification: Eric Darsow and Coral Sheldon-Hess, Adjunct instructor in our Data Analytics discipline, have met to map out a core set of spreadsheet-related skills onto each of our topics in DAT-102 (The intro course) and DAT-201 (Data Analytics 1). This new sequence of skill acquisitions lessons will be delivered in the Spring of 2019.
<b>List faculty contributing to the improvement plan.</b>	<b>Eric C Darsow (North)\ Coral Sheldon-Hess (North)</b>
<b>How many faculty could have participated?</b>	<b>2</b>
<b>Anticipated semester in which the improvement plan will be implemented.</b>	<b>Spring 2019</b>

## Results for Measurement #2

### Summary of Results

How many students participated in the assessment measure?	Total student participants 16	Traditional 16	Hybrid 0	Online 0	Total possible student participants 19
<b>Did the students meet the proposed threshold or benchmark for competence?</b>	<p><b>No; The initial plan stated that gathering self-reflections from 100% of students in DAT-102 is the benchmark for success. We received reflections from 16/19 students (84%).</b></p>				
<b>Discuss any difference in results between modalities (traditional, hybrid, online).</b>	<p>This assessment was administered to only a single, traditional, in-person section. Given the complexity of the subject matter and the newness of this entire curriculum, the Data Analytics program is being designed around traditional course structure.</p>				
<b>Discuss overall strengths and weaknesses of content or course delivery learned from the results of the assessment.</b>	<p><b>Strengths identified:</b> The in-class and interactive nature of the census-related exercises were noted as engaging and memorable.</p> <p><b>Weaknesses:</b> Students highlighted the need for more structured out-of-class practice. Example:                      “More Structured Activities”                      More “assignments” to cement the material in our minds</p>				
Improvement Plan					
<b>What will be done to improve the outcome?</b>	<p>Select a category from the list of CCAC interventions and explain what changes will be implemented to improve student learning.</p> <p>1. Change in course materials: A set of out-of-class practice assignments will be created for each of the core concepts in DAT-102 and DAT-201 for students to work through over the week. Reference responses will be posted for student self-review.</p>				
<b>List faculty contributing to the improvement plan.</b>	<p><b>Eric Darsow</b> <b>Coral Sheldon-Hess</b></p>				
<b>How many faculty could have</b>	<p><b>2</b></p>				

<b>participated?</b>	
<b>Anticipated semester in which the improvement plan will be implemented.</b>	<b>Spring 2019</b>

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## Improvement Plan Results

*To be completed at the end of the second semester in which a given course is taught*

**Submission Date: May 22, 2019**

<b>Results for Direct Measurement #1</b>					
<b>Summary of Results</b>					
<b>How many students participated in the assessment measure?</b>	<b>Total student participants</b>	<b>Traditional</b>	<b>Hybrid</b>	<b>Online</b>	<b>Total possible student participants</b>
<b>Did the students meet the proposed threshold or benchmark for competence?</b>					
<b>Discuss any difference in results between modalities (traditional, hybrid, online).</b>					
<b>Discuss overall strengths and weaknesses of content or course delivery learned from the results of the assessment.</b>					

## **Results for Measurement #2**

### Summary of Results

<b>How many students participated in the assessment measure?</b>	<b>Total student participants</b>	<b>Traditional</b>	<b>Hybrid</b>	<b>Online</b>	<b>Total possible student participants</b>
<b>Did the students meet the proposed threshold or benchmark for competence?</b>					
<b>Discuss any difference in results between modalities (traditional, hybrid, online).</b>					
<b>Discuss overall strengths and weaknesses of content or course delivery learned from the results of the assessment.</b>					

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# Annual Assessment Cycle

## Fall 2018 - Spring 2019



### Annual Reflection

*To be completed at the end of the second semester in which a given course is taught*

**Submission Date: May 22, 2019**

<b>Compare the results from the initial and subsequent assessment measures.</b>	This is quantitative and objective.
<b>Reflect on how the students responded (improved or did not) to the improvement plan.</b>	This is qualitative and possibly subjective. Discuss student successes and identify challenges that persist beyond the improvement plan.
<b>How will these results be used in future planning?</b>	<b>Instruction:</b>
	<b>Curriculum:</b>
	<b>Resource Allocation:</b>