

## UNIVERSITY OF CENTRAL ARKANSAS Proposal for Change in Assessment Plans/Processes

**NOTE:** Changes in assessment plans/processes can be reviewed only during the regular academic year. Action-item proposals must be received by the Academic Assessment Committee at least one month before action is desired.

Department  Date

Program for which the change is proposed

Action Item	Information Item
<p>Select area(s) of change:</p> <p><input checked="" type="checkbox"/> New assessment plan</p> <p><input type="checkbox"/> Assessment plan revision</p> <p><input type="checkbox"/> Alternative reporting method</p> <p><input type="checkbox"/> Other <input style="width: 150px;" type="text"/></p>	<p>Select area(s) of change:</p> <p><input type="checkbox"/> Minor change of wording</p> <p><input type="checkbox"/> Minor change in assessment criteria</p> <p><input type="checkbox"/> Rubric updates</p> <p><input type="checkbox"/> Curriculum/Curriculum Map Update</p> <p><input type="checkbox"/> Other <input style="width: 150px;" type="text"/></p>

Description of change:

New assessment plan.

Reason for change:

Assessment plan for new program

Effective date of change:

Change recommended by (for action items) or noted by (for information items)

	<hr style="width: 80%; margin: 0 auto;"/> <small>DEPARTMENT CHAIR</small>	<input style="width: 100%; text-align: center;" type="text" value="9/20/22"/> <small>DATE</small>
College Curriculum and Assessment Committee	<hr style="width: 80%; margin: 0 auto;"/> <small>COMMITTEE CHAIR</small>	<input style="width: 100%; text-align: center;" type="text" value="10/14/22"/> <small>DATE</small>
	<hr style="width: 80%; margin: 0 auto;"/> <small>COLLEGE DEAN</small>	<input style="width: 100%; text-align: center;" type="text" value="10/17/22"/> <small>DATE</small>
Academic Assessment Committee	<hr style="width: 80%; margin: 0 auto;"/> <small>COMMITTEE CHAIR</small>	<input style="width: 100%; text-align: center;" type="text" value="12-14-22"/> <small>DATE</small>

**UNIVERSITY OF CENTRAL ARKANSAS**  
**ACADEMIC ASSESSMENT PLAN**  
Requirements, Template, and Example

**Requirements**

1. *Submit with New Program Proposal*
  - a. *Programs are encouraged to consult with the Office of University Assessment.*
  - b. *Contact information [assessment@uca.edu](mailto:assessment@uca.edu)*
2. *Send copy of Assessment Plan to the Office of University Assessment, Wingo 215.*
3. *Update the Program Assessment Plan based upon EAPR or Accreditation Cycles.*

**Basic Information**

Program Name: Technical Certificate in Applied Data Analytics

College: College of Business

Department: Computer Information Systems and Analytics

Program Level (check all that apply)

- Associate's
- Bachelor's
- Undergraduate Certificate
- Master's
- Doctoral
- Graduate Certificate

Date Plan Submitted: 8/31/2022

College Dean & email: Michael Hargis ([mhargis@uca.edu](mailto:mhargis@uca.edu))

College Curriculum Committee Chairperson & Email: Steven Schlachter ([sschlachter1@uca.edu](mailto:sschlachter1@uca.edu))

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Department Curriculum Committee Chairperson & email:

**1. Introduction** (identify college, unit, and degree programs)

**Purpose:** The Technical Certificate in Data Analytics is housed in the Computer Information Systems and Analytics Department in the College of Business. It is designed to prepare undergraduate students to collect, analyze and interpret organizational data. Students doing this program may be any UCA student in *any* major or minor. Students completing the certificate will understand the life span of data, from collection to its use in making better decisions. This certificate will prepare certificate awardees for entry-level positions in data analytics. Because there are many important areas of analytics (data management and descriptive / predictive / prescriptive analytics), this certificate provides foundational knowledge and skills consisting of 15 hours work, and includes 9 hours of electives, where a student can drill down into specific areas of analytics. It will provide students with skills in recognizing how data analytics may be used in

multiple disciplines. The collection of data and its effective and efficient use applies to almost all industries and professions.

### **Unit Mission Statement**

The CISA adheres to the College of Business mission, which is as follows: *We educate a diverse population of current and future business professionals to successfully and ethically meet the challenges of the global business environment. Through active engagement with the local, regional, national and global communities, our faculty strive to deliver a high-quality business education via experiential education, a relevant curriculum, and scholarly contributions. We pursue continuous improvement opportunities to add value for our College and stakeholders.*

### **2. Student Learning Outcomes**

- Our graduates shall possess effective communication and collaboration abilities.
- Our graduates shall possess ethical reasoning abilities.
- Our graduates will demonstrate a depth of knowledge of the data analytics field.

### **3. Assessment Cycle**

The assessment cycle used for this technical certificate is the same as that used in the COB, in accordance with our accreditors. It is a five-year cycle. This means that each learning objective (SLO) is assessed twice in a five-year period; after each assessment there is an improvement cycle. The improvement cycle uses an objective Improvement Team to examine the data and make recommendations for both system as well as student learning improvements. While the length of this cycle corresponds to our AACSB accreditation cycle, accreditation has little bearing on the motivation or processes we use to assess student learning and to make improvements to that learning.

More specifics on the assessment cycle are provided in later sections of this AAP (Methods and Measures, Data Collection and Review, Process Participation and Data Analysis).

### **Curriculum Map**

See attached file.

### **4. Assessment Methods and Measures**

The table below lists the goals, student learning objectives, measure, course and benchmark. It is a summative assessment, which measures learning objectives as students finish the program. While formative assessment would be helpful, students are cross-disciplinary, and are not typically part of our department (or even college). In addition, this is an “Applied” program, performance based, and so what is important is that students have the skills when finishing the program.

<b>Goal</b>	<b>Objective: Students will</b>	<b>Measure: Students</b>	<b>Course</b>	<b>Benchmark</b>
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be able to		will		
1. Our graduates shall possess effective communication and collaboration abilities	1a. Produce professional quality written documents.	Students will prepare a written assignment on a discipline-specific topic in data analytics.	CISA 4380	The mean score of students assessed will be at least 80%.
	1b. Work in teams to solve business problems.	Students will complete a small-group team project.	CISA 4381	The mean score of students assessed will be at least 80%.
2. Our graduates shall possess ethical reasoning abilities	2a. Be aware of ethical issues inherent in business decisions and articulate the manner in which they arrived at an ethical decision.	Students will complete an assignment (business case or other writing assignment) dealing with ethical decision making or the social responsibility of business.	CISA 4380	Mean score of students assessed with the rubric will be 80% or above
3. Our graduates will demonstrate a depth of knowledge of data analytics field.	3a. Effectively and professionally participate in and help manage a data analytics project, from gathering and cleansing data to applying appropriate analyses.	Students will work in teams in a semester-long project and be evaluated on their performance.	CISA 4381	Mean score of students assessed with the rubric will be 80% or above

The project associated with goal three (3) will be a comprehensive data problem. Meaning the students will start from the beginning, define a data-related question they want to investigate. Then find the data that will allow them to answer their question(s). Note, they will not be expected to collect the data (e.g. surveys or experimentation) but instead to find existing data from publicly available sources. This is done to be able to keep the time scale within the span of a typical semester-long course. Then students will need to assess, clean, and analyze their dataset ultimately providing appropriate analyses and interpretations via an end-of-semester presentation.

		0	1	2	3	4	5
<b>Team Feedback</b>		Ineffective Behavior		Acceptable Behavior			Most Effective Behavior
	Acting Responsibly to the Team						
	Creating a Positive Team Climate						
	Making a Collaborative Effort						
	Managing Conflict Inclusively and Constructively						
	Monitoring Individual and Team Performance						
<b>Instructor Assessment</b>		Average grade scaled (0-5) for all team assignments during the semester.					
	Team Assignments						

Figure 1 - Rubric for LO 3

Each of these steps will be assessed as milestone deliverables for the projects. Simultaneously to this throughout the semester, students will engage in a series of regular course activities relating to each of these deliverables. This will provide the instructors with individual metrics for assessment of "depth of knowledge" along with team-based assessments and peer evaluations of the individual student's abilities to apply their knowledge to a comprehensive business problem and successfully operate within a team environment (itself a business-related outcome objective).

## 5. Data Collection and Review

Assessment occurs on a cyclical basis. In general, for all objectives, data are collected twice in a five-year period. The time period between collection efforts is used to analyze the data and come up with measures for improvement. Improvements may be systematic--such as rubric changes,

data gathering improvements, process improvement, etc. There also should be learning improvements--that is, based on the data collected, how can we improve student learning? This may include additional or different assignments, teaching methodologies, or other types of activities. Sometimes such effort is directed at previous course(s), since the content or analysis is covered in courses taken prior to the assessed course (see curriculum map).

Data are collected in accordance with a schedule that is kept up to date and located within the COB. While schedules are typically long-standing, there are changes that inevitably occur, which means an objective that is supposed to be assessed one term gets pushed back to a later term (for example, recently a faculty member resigned mid-semester and assessments scheduled in those classes were rescheduled to the following term). But despite minor schedule changes, one thing will hold constant: two data collections every five-year period. The benchmark is provided under Methods and Measures, as part of the table for the Assessment Plan. But in general, the COB has adopted the following benchmark for internal benchmarks: 80% for undergraduate courses. External benchmarks are varied, depending on the type.

For all assessments, the instructor is responsible for conducting the assignment or test and filling out the rubric or grading the test (except for UCA Core assessments, where a group of graders assign rubric scores based on the assignment artifact(s)-but this process is not covered here). The data are then collected by the COB Director of Assessment. The process following this is outlined in the Process Participation.

## **6. Participation in Assessment Process**

Faculty in assessed courses carry out the initial assessment assignment, and assess in accordance with the given rubric or other artifact. Faculty are reminded before the semester begins as well as right before the semester starts of objectives to be assessed, and the courses involved. The rubric or other artifact is then collected by the COB Director of Assessment (one of the members of the COB Curriculum and Assessment Committee-COB CAC). The data are transcribed into a readable format, typically a spreadsheet, by either the instructor or the Director of Assessment. This data is then included as part of a report, that next goes to the COB Improvement Team which is assigned for that objective. This report consists of the learning goal, learning objective (SLO), data gathered, trends, problems noted, and other useful information that might help improve learning.

The Improvement Team consists of faculty members from the CISA department. The Improvement Team also examines objectives for multiple data analytics programs, including the BS-Applied Data Analytics, MS-Applied Data Analytics and the Graduate Certificate in Data Analytics. The team will examine all appropriate documents and resources (e.g., other faculty members), and come up with both systematic and learning improvement recommendations. These recommendations are submitted to the departmental curriculum and assessment committee, for further insight and recommendations. The recommendations then flows to the COB CAC, where they endorse or make further recommendations. This then flows to the Executive Committee (chairs, Associate Dean, MBA Director) for examination. After their recommendation, the final stop is with the Dean for approval.

The entire point of this process is to uncover ways to improve student learning. Sometimes it is the process that should be improved (such as when the assessment should occur), but more often it is recommendation for improving student learning. Teams frequently focus on rubric items (or other artifact) that have the lowest scores, and seek ways to improve that item(s).

## **7. Data Analysis**

Gathered data are first examined and analyzed by the Director of Assessment, a position on the COB Curriculum & Assessment Committee. The data are put in a usable format, and trends noted, among other analytic tools. One of the metrics used is comparing the data to the given benchmark, to see whether or not the objective passed the benchmark. Both internal and external benchmarking is used in the COB (though only internal will be used in this certificate program). In addition, historical trends benchmarking is performed, to compare current students with past peers (this provides useful trend information). Benchmarks are useful, but in reality attempts are made to make improvements whether the benchmark is passed or not. The process of examining and analyzing the data, and making improvement suggestions, is provided in the previous section (Process Participation). The data and recommendations are shared with faculty throughout the process. They are not only shared, but many faculty have a hand in suggesting improvements and carrying them out.

Results from the data analyses are not just used to make student learning improvements, though that is the primary purpose. Results are also used in feedback loops to check alignment with strategic priorities and goals.

## **8. Plan for Using Assessment Results to Improve Program**

This has been covered some already. We use assessment results to improve student learning. Enhancing student learning improves our programs and provides increased value to stakeholders, in particular employers who hire graduates. That said, this certificate program can be taken by any UCA major or minor (excepting those who major/minor in data analytics). Therefore, analyzing and listening to students themselves, who may be from different departments and colleges, is very important.

## **9. What are the plans to evaluate students' post-graduate success?**

Post-graduate success is a difficult thing to ascertain with any degree of accuracy. It is a critical component in improving learning, however. The COB as a whole are in the process of collecting such data and refining the best possible ways of doing so. The below applies to all COB programs, undergraduate and graduate. Here is a synopsis of what is being done now:

- The COB collects data in a student's very last semester before graduation. Usually this is done at graduation. This provides information on "getting the first job", at least by the time the student graduates. Other information is also collected, such as part-time employment while in school (which could help getting that first job). This has been an invaluable resource in evaluating what students think as they finish their program.
- Collect job information in first few weeks after graduation--same as the first, but done by email and allows collection of more recent data (job?). The problem is less control over responses.
- COB has/is working with Alumni Office to send out surveys to graduates, at different time frames (right after graduation, six months after, etc.).

None of these methods are (as yet) providing all the information we need and want. This is a critical item, however, and so must be solved. Surveys of grads is one of the most promising ways-- but the process must be refined.

#### **10. What are the plans to evaluate teaching effectiveness?**

There are some extensive processes to evaluate teaching effectiveness, both in the COB and the department. This is a multi-method process, and is outlined in the COB Faculty Development Plan. It consists of two related efforts: encouraging the use of available resources to discover ways to improve teaching and using evaluations of teaching to monitor teaching effectiveness. Sometimes the same artifact is used for both: for example, student evaluations are used to identify potential weak areas, with the idea of encouraging improvement. Simultaneously, student evaluations are used to track teaching performance and trends over time. A synopsis of these efforts follows:

- Use student evaluations of faculty as a guide for improving teaching and following faculty trends.
- Using peer/chair direct observation of teaching for improvement recommendations. The CISA Department does this routinely every semester.
- The CISA Department conducts a book club every semester (for the last four years), always on some aspect of improving teaching. Almost all faculty attend the weekly meetings, and no classes are scheduled at that time (Wednesdays at 1100).
- Annual faculty evaluations include a significant section on teaching effectiveness; some is based on student evaluations, but not all. Evaluations serve as both encouragement and as a performance measure.
- CETAL activities are most highly encouraged! All of their activities in teaching effectiveness count as one (or more) of the required Academic/Professional Engagement Activities that all faculty must have to maintain qualification (a critical endeavor for COB accreditation).
- Professional development activities that involve teaching are encouraged and frequently funded, by the department, COB or UCA sources (or some combination).
- Online teaching is evaluated and certified through the UCA Online office, which provides a useful benchmark for faculty new to the online format.

#### **11. Appendices-Required**

Attached are the following documents:

1. Curriculum Map for the TC-ADA (Excel spreadsheet)
2. Rubrics for assessment (we use similar rubrics as the UCA Core)
  - Written communication rubric
  - Ethics rubric
  - Teamwork rubric (not attached; we use the Communication Rubric C (Collaboration))

#### **12. Submit Assessment Plan**

- Send completed form electronically to [assessment@uca.edu](mailto:assessment@uca.edu)

For questions or concerns please contact:  
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