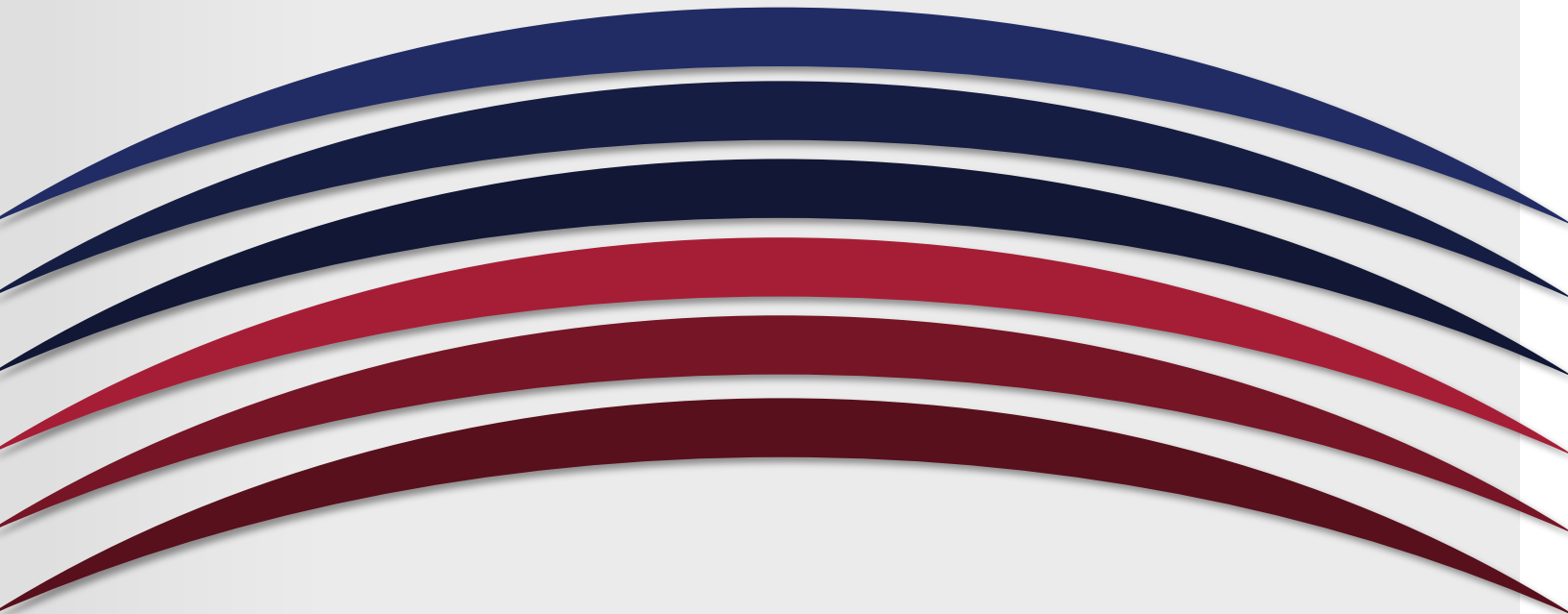


# UNIVERSITY OF ARKANSAS PULASKI TECH

## Assessment Report: Program Level

The University of Arkansas – Pulaski Technical College calls for each program (AS, AA, AAS, CP, and TC) to have an assessment plan for each academic year that includes the following:

- Program learning outcomes
- Procedures for assessing the achievement of student learning
- Procedures for analyzing and interpreting assessment results for the continuous improvement of the program.



A primary goal for each instructional department's assessment is to include at least one direct measure of student learning, which is accomplished usually through the use of locally developed tests, student portfolios, capstone assessment measures, embedded assignments, or through licensure exams and standardized national tests. In addition to direct measures, most areas may also use indirect methods to assess student achievement. Graduation rates and graduation and employer surveys are frequently used as indirect indicators of student achievement.

This form presents template of questions that must, at minimum, be addressed by instructional departments when filing an assessment plan. While an electronic version of this form will be made available, instructional departments may include additional information not specifically addressed in this form as long as the template questions are addressed.

### Other Assessment Considerations:

- The College expects programs/departments/divisions to make curriculum changes and budget requests based in part upon assessment findings. Assessment of student learning should be a catalyst for quality instruction and improvement across the college community.
- All programs will be asked to submit an annual assessment report to the Assessment Committee by October 10 of each year. (If October 10 falls on a weekend, please submit reports on the following Monday.)
- For technical and occupational programs, please consider the role of your advisory committee in your student learning objectives.

This form must be completed by October 10 of each academic year. Complete each part of this form. Please follow highlighted instructions.

### Part A: Identification and Student Learning Outcomes

1. Name of program: Baking and Pastry Arts
2. Name of individual compiling report: Chocla Lea
3. Date of submission: October 10, 2022
4. Academic year: 2022-2023
5. Is the assessment plan (*Check or highlight one*)  
☐ an initial plan for the program      ☐ a revision of an old plan      x ☒ unaltered from previous year

**6. Provide a mission statement of the program to include a description of the jobs/careers for which students are being prepared. Also, list the learning outcomes for your program.**

*The mission of the Culinary Arts and Hospitality Management Institute is to deliver education, experience and excellence through high quality academic programs that meet stakeholder needs and demands in a global market to achieve effective and efficient program delivery.*

**Department / Program Learning Outcomes**

*The Culinary department, consistent with the College's mission and the Division's objectives, encourages the success of its students in all technical fields and academic disciplines by promoting:*

- *Establish and maintain high standards of sanitation and food safety as established by the SERV SAFE® program.*
- *Demonstrate proficiency in basic terminology and techniques for culinary arts and baking and pastry arts to include food preparation, presentation, and service.*
- *Identify and demonstrate the concepts of recipe costing, purchasing, receiving, and issuing practices in food service operations.*
- *Explain the characteristics, functions, and food sources of the major nutrients and understand and demonstrate nutritional cooking methods including how to maximize nutrient retention.*
- *Communicate clearly and professionally, both verbally and in writing.*
- *Develop strategies to improve business performance using creativity and problem-solving skills, based on operational theory and procedures.*
- *Develop skills integral to success in the industry including guest service, supervisory management, the ability to work with others, and handling multiple tasks simultaneously.*
- *Develop and apply ethical and sustainable hospitality industry policies.*

**Concentration: Baking & Pastry Arts**

- **Sanitation and Safety:** *Demonstrate professionalism and sanitation practices as well as mise en place, organization, sense of urgency and timing in a professional kitchen.*
- **Basic Baking:** *To apply the fundamentals of baking science to the preparation of a variety of products and to use and care for equipment normally found in the bake shop or baking area.*
- **Advanced Baking:** *To develop more advanced decorating techniques and more complex preparation of pastry, confections and dessert products.*
- **Nutrition:** *To describe characteristics, functions and food sources of major nutrients and how to maximize nutrient retention in food preparation and storage and to apply the principles of nutrient needs throughout the life cycle to menu planning and food preparation.*
- **Purchasing & Receiving:** *To understand the overall concept of purchasing and receiving practices in quality foodservice operations, apply knowledge of quality standards and regulations governing food products to the purchasing functions and receive and store food and non-food items properly.*
- **Hospitality in the Baking & Pastry Industry** *To develop an understanding of the hospitality industry and career opportunities in the field, investigate trade publications and professional organizations appropriate for continuing education and become familiar with the organizational structure and basic functions of departments within hospitality and foodservice establishments.*
- **Business and Math Skills:** *To perform mathematical functions related to foodservice operations. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques. Calculate a recipe conversion factor to make a desired quantity of a given recipe and compute the new ingredient quantities using the recipe conversion factor*

**7. Complete the curriculum map below.** Please mark an X in the map below to indicate which courses correspond with learning outcomes. If applicable, you can also use I, D, or M to indicate that a learning outcome is introduced, developed to foster more sophistication, or demonstrated at a level of mastery acceptable for graduation within the program. Additional courses may be marked with an R to indicate reinforcement of a program learning outcome.

1 – Introduced 2 – Developed 3 – Mastered	CUL 1301 Foodservice Sanitation	BAK 1301 Baking 1	BAK 1302 Basic Pastry	BAK 1303 Cake Decor	BAK 1304 Baking 2	BAK 1305 Candies	BAK 1306 Artisan Breads	BAK 1307 Centerpiece	BAK 2302 Adv. Pastry	BAK 2302 Adv. Wedding
Safety and Sanitation	1,2	1,2,3	1,2	2	2,3	1,2,3	2	2	2,3	2
Basic Baking		1,2,3	1,2,3	1,2,3	2,3		2,3	2	2	2
Advanced Baking		1	1,2	1,2	2,3	1,2,3		1,2,3	2,3	2,3
Nutrition		1	1,2		2		2		2,3	
Hospitality in Baking & Pastry		1	1	1	2,3	1		2	2,3	2,3
Purchasing and Receiving	1,2	1	1		2,3	1,2			2	2
Business and Math Skills		1,2,3	1		1,2,3	2	2,3	2,3	2,3	2,3

## 8. How does your assessment report connect to institutional learning outcomes?

To help with mapping your assessment data to the school's overall institutional outcomes, please check the boxes for the institutional outcomes directly associated with the assessment data presented in this report. For details on each outcome, see Appendix A.

- ☐ ILO #1 – Information Literacy
- ☐ ILO #2 – Technology Literacy
- ☐ ILO #3 – Communication
- ☐ ILO #4 – Critical Thinking
- ☐ ILO #5 – Quantitative Reasoning
- ☐ ILO #6 – Cultural Awareness
- ☐ ILO #7 – Professionalism

## Part B: Assessment Methods and Data Sources

In this section of the assessment plan, learning outcomes for the program will be defined. Also, assessment methods and data sources for each outcome must be defined. Follow the instructions below to define and relate the program learning outcomes.

1. Complete the chart below or attach documentation of the assessment process that includes the data included below.

Program Learning Outcomes	Course	Assessment Method and/or Data Source
1. <i>Sanitation and Safety: Demonstrate professionalism and sanitation practices as well as mise en place, organization, sense of urgency and timing in a professional kitchen.</i>	CUL 1301 BAK 1302 BAK 2302	CUL 1301: Sanitation Final Exam (assessed from Culinary) BAK 1302: Basic Pastry Final Lab Score BAK 2302: Adv. Pastry Final Practical Sanitation Score
2. <i>Basic Baking: To apply the fundamentals of baking science to the preparation of a variety of products and to use and care for equipment normally found in the bake shop or baking area.</i>	BAK 1301 BAK 1302 BAK 1303 BAK 1306	BAK 1301: Baking 1 Final Exam BAK 1301: Baking 1 Final Practical Score BAK 1302: Basic Pastry Final Exam BAK 1302: Basic Pastry Final Practical Score BAK 1303: Cake Decor Final Exam BAK 1303: Piping Practical BAK 1306: Artisan Breads Final Exam BAK 1306: Artisan Breads Final Practical
3. <i>Advanced Baking: To develop more advanced decorating techniques and more complex preparation of pastry, confections and dessert products.</i>	BAK 1305 BAK 1307 BAK 2302	BAK 1305: Candies & Chocolate Final Exam BAK 1305: Candies & Chocolate Final Confection BAK 1307: Centerpiece Cakes Final Practical BAK 2302: Adv. Pastry Final Practical Score BAK 2302: Adv. Wedding Piping Practical
4. <i>Nutrition: To describe characteristics, functions and food sources of major nutrients and how to maximize nutrient retention in food preparation and storage and to apply the principles of nutrient needs throughout the life cycle to menu planning and food preparation.</i>	BAK 1302 BAK 2302	BAK 1302: Basic Pastry Healthy Dessert Quiz BAK 2302: Adv. Pastry Judges Packet- Nutritional Analysis of Plated Dessert
5. <i>Purchasing &amp; Receiving: To understand the overall concept of purchasing and receiving practices in quality foodservice operations, apply knowledge of quality standards and regulations governing food products to the purchasing functions and receive and store food and non-food items properly.</i>	BAK 1304	BAK 1304: Baking 2 Sous Chef Checklist
6. <i>Hospitality in the Baking &amp; Pastry Industry: To develop an understanding of the hospitality industry and career opportunities in the field, investigate trade publications and professional organizations appropriate for continuing education and become familiar with the organizational structure and basic functions of departments within hospitality and foodservice establishments.</i>	BAK 2302	BAK 2302: Adv. Pastry Book Report
7. <i>Business and Math Skills: To perform mathematical functions related to foodservice operations. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques. Calculate a recipe conversion factor to make a desired quantity of a given recipe and compute the new ingredient quantities using the recipe conversion factor</i>	BAK 1301 BAK 1306 BAK 2302	BAK 1301: Baking 1 Online Recipe Conversion BAK 1306: Artisan Breads Math Quiz #2 BAK 2302: Adv. Pastry Judges Packet: Calculated Recipes & Menu Pricing

2. Please check or highlight any of the statements below that apply to your program assessment. Also, for each program outcome, if applicable, attach any assessment instruments, grading rubrics, or exemplars of student performance used at the program level.

☒ Rubrics and/or standardized tests were pilot-tested and refined.

☒ Rubrics were shared with students.

☐ Reviewers were calibrated with high inter-rater reliability or norming workshops.

3. **Also discuss any additional data sources that may be used to gauge success (e.g. charts, graphs, surveys, rates).**

*Reading checks and quizzes in the online Revel platform for the On Baking textbook or tests in Blackboard show areas or questions where students score lower. Faculty uses this information to determine what concepts may need review or practice in class.*

4. **Describe the process of analyzing the assessment data, including specifically discussion of results and collaboration among faculty in the program, for the last academic year. Also, check below any of the following statements that apply to your program assessment.**

*Faculty meets at the end of each semester to review results of each assessment. Faculty discusses areas of weakness and ways to improve outcomes. Faculty also discusses strategies to strengthen foundation & knowledge in lower level classes to improve outcomes in advanced classes.*

☒ **Comparative data used when interpreting results and deciding on changes for improvements.**

*Assessments between different sections of the same course as well as anecdotal evidence used to make improvements if trends are evident.*

☒ **National standards, collaboration with sister programs and/or research data were used to ensure the program was held to high standards.**

*Our program accreditation with the ACF ensures foundational knowledge & techniques are taught and assessed.*



5. Complete the chart below or attach documentation of the assessment results that includes the data included below. Results should include total number of students assessed, the distribution of scores, relevant and detailed interpretation, student strengths and weaknesses, and whether the target was met.

Program Learning Outcomes	Assessment Results/Conclusion
<b>Sanitation and Safety: Demonstrate professionalism and sanitation practices as well as mise en place, organization, sense of urgency and timing in a professional kitchen.</b>	<p><b>BAK 2302 Adv. Pastry Final Practical Sanitation Score:</b> Conclusion: 9 out of 9, or 100% of students scored 80% or higher for the sanitation &amp; organization grade.</p> <p>Conclusion: Assessment Goal/ Threshold Met</p> <p>Analysis: Students performed well- it was a timed practical in a competition format. 100% earned 75%. Most of the points taken were due to students going past their allotted time.</p> <p>Continuous Improvement Action Plan: Continue assessment as is, as well as add more timed practices.</p>
<b>Basic Baking:</b> To apply the fundamentals of baking science to the preparation of a variety of products and to use and care for equipment normally found in the bake shop or baking area.	<p><b>BAK 1301 Final Exam:</b> 90% of students scored 70% or higher</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: Most students perform well- there are 7 students we not included in these numbers because they did not take the final exam. All instructors gave a final review and a practice test available online for students.</p> <p><b>BAK 1301 Baking 1 Final Practical:</b> 100% scored 80% or higher. Average Score: 82.6%</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: All students showed competence in basic baking skills and time management skills when working in pairs to complete this exam.</p> <p><b>BAK 1303 Cakes and Cake Decorating Final Exam:</b> 31 students scored 80% or higher and 97% of all students scored above 90%.</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: Students were given material to study and were reviewed on all materials prior to the test. They were coached on key words to include in answers and descriptions.</p> <p><b>BAK 1306 Artisan Breads Final Exam:</b> 11 students scored (95% or above) 11 students scored (70% or above), 2 students did not complete the exam.</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: For the most part, students seem to grasp the material covered in this class.</p> <p><b>Artisan Bread Final Practical:</b> The average score for final practical is 92%.</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: The students did well overall on dough formulation and bread production.</p>
<b>Advanced Baking:</b> To develop more advanced decorating techniques and more complex preparation of pastry, confections and dessert products.	<p><b>BAK 1305 Candies &amp; Chocolate Final Confection Practical:</b> 92% of students scored an average of 82.5%.</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: Students successfully completed the practical and were graded on chocolate tempering, shell molding and ganache formulation. Students had multiple opportunities to practice techniques during the semester.</p> <p><b>BAK 1307 Centerpiece Final Practical and BAK 2303 Adv. Wedding Final Practical:</b> 88% of the students scored 80% or higher</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: All students successfully created cakes for their final practical.</p>
<b>Nutrition:</b> To describe characteristics, functions and food sources of major nutrients and how to maximize nutrient retention in food preparation and storage and to apply the principles of nutrient needs throughout the life cycle to menu planning and food preparation.	<p><b>BAK 2302 Judges Packet: Nutritional Analysis:</b> 90% of students scored 75% or better on the nutritional component of their final practical.</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: Nutritional balance &amp; evaluation was judged as part of their competition dessert plates: desserts were evaluated through portion size and balance of component ingredients. All students were successful in this regard.</p>



<p><b>Purchasing &amp; Receiving:</b> To understand the overall concept of purchasing and receiving practices in quality foodservice operations, apply knowledge of quality standards and regulations governing food products to the purchasing functions and receive and store food and non-food items properly.</p>	<p><b>All Baking Classes</b> - Discuss and analyze the importance of sanitation and HACCP procedures that affect receiving and issuing of goods in a foodservice operation.</p> <p><b>Student Self-Assessment- Sous Chef Position</b> (rotating position): Sous Chef are responsible to gathering/storing ingredients, maintaining temperature logs of refrigerator/freezer and ensuring proper storage of finished product. Students complete a self-assessment of their performance during the baking (sous chef) rotation. 84% of students scored 75% or higher.</p>
<p><b>Hospitality in the Baking &amp; Pastry Industry:</b> To develop an understanding of the hospitality industry and career opportunities in the field, investigate trade publications and professional organizations appropriate for continuing education and become familiar with the organizational structure and basic functions of departments within hospitality and foodservice establishments.</p>	<p><b>BAK 2302: Final Book Report:</b> Students wrote a book report for a professional level cookbook using MLA format and rubric. Average score for book report is 95%.</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: 97% of students scored in the 90-100% range.</p>
<p><b>Business and Math Skills:</b> To perform mathematical functions related to foodservice operations. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques. Calculate a recipe conversion factor to make a desired quantity of a given recipe and compute the new ingredient quantities using the recipe conversion factor</p>	<p><b>Artisan Breads Math Quiz #2</b> Results: 85% of students scored 75% or better on the formulation quiz.</p> <p>Conclusion: Assessment Goal/Threshold Met</p> <p>Analysis of Results: Students were successful in this quiz. Students practice the skills used by calculating formula's each week for the lab work.</p>



1. **Describe your use of results, including planned improvements to the program and/or any follow-up studies that confirmed that changes have improved student learning.**

*The instructors decided that repetition is the most effective tool for our students. Will continue covering all learning objectives in the first 3-4 weeks, students will then continue these learning objectives through rotation allowing the students to learn through repetition and practice using the same techniques in different desserts.*

2. *For our beginner-level courses where there is a large amount of knowledge to retain, all of the quizzes can be repeated until desired score is achieved and a practice final exam that can be taken repeatedly is available in Blackboard a few weeks before the final exam. This change has shown improvement in all students who took advantage. For practical exams, we added additional lab opportunities for Adv. Pastry for students to practice and receive feedback, which improved student confidence and performance in the plated dessert practical.*

*The incorporation of hybrid courses has allowed our students more time, additional help from instructors, learning module, and the ability to take additional Gen Ed. Classes.*

**What specific changes were implemented this year based on last year's results?**

a. *Baking 1: Cover learning objectives weekly with a quiz each week over covered materials. Learning modules are added to blackboard for added help. Mid-Term practical was added to the baking 1 classes. The instructors noticed students did not remember techniques taught early in the semester. Implementing the mid-term was to reinforce knowledge learned over the first half of semester. Conversion factors were added to the mid-term as well to test students' understanding.*

b. *Basic Pastry Techniques, Candies & Chocolates, Adv. Pastry Techniques: Cover all learning objectives in the first 3-4 weeks, then students will work in rotations to practice the same techniques using different recipes. Students will have repeated opportunities to practice and see the techniques/products every week. Instructors added an additional rotation to the Advanced Pastry class. The rotation added allows the students to participate in the dessert plating during dinner service. This was implemented because a vast majority of students expressed interest in plating and seeing the final plating of their work.*

c. *Cake Décor: curriculum was adjusted to include additional baking formula's and pastry techniques to expand on techniques that are not fully covered in the Basic and Adv. Pastry classes. This is the second year that the curriculum is in place and adjusted based on feedback from previous year.*

d. *Baking 1, Basic Pastry, Candies & Chocolate, Adv. Pastry, Centerpiece Cakes, Artisan Breads: Classes are converted to a Hybrid format. Four hours in-person class to focus on technique-based learning. Two-hour online learning covers course material, learning modules, quizzes, and an overview of what is learned in class.*

e. *Adv. Pastry and Basic Pastry: Covering a variety of restaurant style desserts and incorporating plating techniques.*

f. *Baking 2, Artisan Breads and Candies & Chocolates: instructors are adjusting curriculum to add more knowledge on how to package, market and sell products. Baking 2 has added online ordering with the goal of increasing "sales" and production.*

3. **What specific budgetary resources are needed for your program based on your assessment results?**

*To continue to increase learning opportunities that add to professional knowledge outside of culinary/baking techniques; added equipment, POS, and food packaging capabilities including:*

- a. *heat sealer/ food vacuum for packaged confections/ cookies*
- b. *POS system to include sticker printer for Baking 2/ Patisserie service; possible online store*

c. *Packaging product for confectionery & cake courses to demonstrate branding opportunities and safe storage of products.*

4. Please write any additional information here that you think is pertinent to the assessment process for your program that assists stakeholders (i.e. administrators and standing committees) in understanding your report.

n/a

## Appendix A – UA-PTC’s Institutional Learning Outcomes

### 1. Analyze information from credible sources. (Information Literacy)

This may include the ability to:

- Locate relevant information
- Evaluate the quality and usefulness of the information
- Synthesize the information.
- Communicate the information in an ethical manner consistent with the standards of the field or program of study.

### 2. Appropriately apply a variety of technology tools within one’s discipline. (Technology Literacy)

This may include the ability to:

- Acquire information,
- Solve real-world problems,
- Communicate, and/or
- Perform tasks and processes.

### 3. Communicate effectively with diverse audiences in multiple contexts. (Communication)

This may include the ability to:

- Develop, organize, and present orally well-supported and ideas formally and informally with consideration of community and context.
- Develop, organize, and present in written format well-supported ideas formally and informally with consideration of community and context.
- Clearly express ideas, information, and concepts in various modes and media, including the proper use of appropriate technology.
- Select and utilize means of communication appropriate for a variety of professional, civic, and social circumstances, environments, and communities.
- Consider diverse communities in multiple contexts.

### 4. Apply critical thinking skills to achieve a desired goal. (Critical Thinking)

This may include the ability to:

- Apply appropriate methods to solve problems or address issues.
- Use evidence to justify conclusions.

### 5. Use quantitative methods to solve problems. (Quantitative Reasoning)

This may include the ability to:

- Analyze and interpret quantitative information.
- Apply quantitative concepts and skills to solve real world problems.

### 6. Demonstrate awareness of cultural differences. (Cultural Awareness)

This may include the ability to:

- Explain how similar actions can be understood differently depending on cultural context.

- Evaluate the impact of culture on individuals and groups.

**7. Demonstrate career readiness skills. (Professionalism)**

This may include the ability to:

- Demonstrate personal accountability.
- Meet commitments.
- Demonstrate ethical behavior.
- Demonstrate teamwork.