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: *AAS in CIS Programming Option*

2. Name of individual compiling report: *Raymond Williams*

3. Date of submission: *10-9-2022*

4. Academic year: *2021-2022*

5. Is the assessment plan (*Check or highlight one*)

☐ an initial plan for the program ☒ a revision of an old plan ☐ 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 Associate of Applied Science (AAS) in Computer Information Systems is an occupational degree program that prepares students for entry-level positions in information technology support. The degree provides a comprehensive introduction to the field of information technology while helping students develop a skill set that prepares them for employment.

Job Opportunities
PC support technician
Entry level programmer
Entry level web developer
Entry level data scientist

Program Learning Outcomes

- Assess technology problems and implement the best solutions both independently and as a dependable team member
- Communicate both in writing and verbally about computing concepts and processes using technical terms effectively to both professional and lay audiences in order to secure and maintain employment.
- Demonstrate knowledge of mathematics and logical approaches to problem-solving in order to analyze a situation and anticipate and prepare for a variety of unknown events that might impact the operation of a computer system or network.
- Demonstrate technical computing skills to prepare for industry certification or to be technically competent in a particular computing position or job field.
- Demonstrate safe work habits that reflect concern and care for self and an understanding of the local and global impact of computing on individuals, organizations, and society in the context of sustainability.

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.

List all supporting cours	Program Learning Outcomes						
	PLO #1	**PLO #2**	**PLO #3**	**PLO #4**	**PLO #5**		
Intro to Programming	**X**	**X**	**X**	**X**	**X**		
Programming II	**X**	**X**	**X**	**X**	**X**		
Data Science	**X**	**X**	**X**	**X**	**X**		
Web Programming	**X**	**X**	**X**	**X**	**X**		
Mobile App Development	**X**	**X**	**X**	**X**	**X**		

Object Oriented Programming	X	X	X	X	X		
Relational Database	X	X	X	X	X		
Internet Technologies	X	X	X	X	X		
Computer Science 1	X	X	X	X	X		
Computer Science 2	X	X	X	X	X		

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. *PLO 1*	*Introduction to Programming*	*Project*
2. *PLO 1*	*Internet Technologies*	*Project*
3. *PLO 2*	*Introduction to Programming*	*Project*
4. *PLO 2*	*Internet Technologies*	*Project*
5. *PLO 3*	*Introduction to Programming*	*Project*
6. *PLO 3*	*Internet Technologies*	*Project*
7. *PLO 4*	*Introduction to Programming*	*Project*
8. *PLO 4*	*Internet Technologies*	*Project*
9. *PLO 5*	*Introduction to Programming*	*Not Assessed*
10. *PLO 5*	*Internet Technologies*	*Not Assessed*

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.

   Insert Programming Grading Rubric

   The Rubrics are shared with the students via a video showing them how to do the project resulting in an A.

3. Also discuss any additional data sources that may be used to gauge success (e.g. charts, graphs, surveys, rates).
   I am currently reviewing and doing data analysis on the last three years of data for Internet Technologies and Introduction to Programming.

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.

   As we've moved courses online for the Pandemic, we discussed the use of videos and different time constraints on assignments. During the last three years I have piloted having very forgiving assignment dates and providing not only lecture videos on the subject, but videos that show students precisely how to complete their programming projects. The students watch their instructor successfully complete a project and then they repeat the project with their own content and often variations that still complete the check list of requirements. The assignments themselves are rubrics. It is the nature of a programming assignment.

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

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

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

1. *PLO 1 – Internet Technologies/Intro to Programming*	Mean Average grade was 3.04 but the Median grade was 4.0 on a 4.0 scale with a 83.4% success rate. This is within a percentage point of the last three years. Prior to the pedagogy changes/additions, we had success rates between 70-75%
2. *PLO 2 – Internet Technologies/Intro to Programming*	Mean Average grade was 3.04 but the Median grade was 4.0 on a 4.0 scale with a 83.4% success rate. This is within a percentage point of the last three years. Prior to the pedagogy changes/additions, we had success rates between 70-75%
3. *PLO 3 – Internet Technologies/Intro to Programming.*	Mean Average grade was 3.04 but the Median grade was 4.0 on a 4.0 scale with a 83.4% success rate. This is within a percentage point of the last three years. Prior to the pedagogy changes/additions, we had success rates between 70-75%
4. *PLO 4 – Internet Technologies/Intro to Programming*	Mean Average grade was 3.04 but the Median grade was 4.0 on a 4.0 scale with a 83.4% success rate. This is within a percentage point of the last three years. Prior to the pedagogy changes/additions, we had success rates between 70-75%
5. *PLO 5 – Internet Technologies/Intro to Programming*	*This PLO is not adequately evaluated in the capstone projects at present.*

6. 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.
   I am in the middle of student demographics and success. For instance, I have found that African American students perform very well (over 70% success rate) in our programming program particularly compared to national success rates. However, the fact that there is a significant statistical spread between African American students and the student body as a whole, is something to investigate and improve upon.

7. What specific changes were implemented this year based on last year's results?
   No changes. We need more than a year's worth of data to prove something works.

8. What specific budgetary resources are needed for your program based on your assessment results?
   None at present

9. 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.
   Our program, like many others, underwent a necessary shift to a more online environment. We try to mix the successful components of a traditional lecture course in programming, through video, with the necessary tools of an online class. This creates an environment where the student may attend in class, virtually, or catch up later.

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.