

Institutional Mission

Arkansas Tech University-Ozark Campus, in partnership with the community, will provide a quality educational environment which will enable all students to learn the skills and acquire the knowledge necessary for them to become contributing members in the workforce and in society. Arkansas Tech University is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

Program Mission

The mission of the Automation Systems program is to empower our students to better their lives and to contribute positively to organizations and communities in which they work and live. We accomplish this by providing, quality education with a "Student-centered" focus that prepares them for careers in the Automation, Electronics, and related fields.

1 Calendar Year Assessment Information

2020 Automation Technology Outcomes

(**NOTE**. This block provides a brief description of actions taking place (or planned to take place) during the current assessment cycle. If there are more (or less) outcomes assessed, please alter as necessary. Additional comments are also welcome.) Point of Contact for this year's assessment (add additional names as needed): 1) 2) APPROVALS

----- Department
Head Approval: Date: Dean Approval: Date: Office of Assessment Approval: C. Austin Date: 9.8.21

Program Level Context: (ex. Second year using Weave Assessment Management System, or ADHE Program Review conducted on 3/15/20) Student Learning Outcomes Assessed during Calendar Year 2020 (Add more as necessary): Outcome 1: Curriculum Committee Proposals or Changes (erase choice not used): Y / N Assessment Data Used as Support for Change: (give Outcome #) Is Status of Project Noted in Title Bar Current? (erase choice not used): Y / N Change status in title bar above Are All Attachments Noted in Assessment Plan Added Below? (erase choice not used): Y / N

----- Additional Comments:

1.1

Program Learning Outcomes

Demonstrate understanding of automated industrial machines.

Objective: Install, design, and troubleshoot hydraulic and pneumatic systems.

1.1.1

Measures

Hydraulic Valve Identification

Student will identify 10 fluid power valves diagrams

METHODOLOGY*

Test will be given after chapter 4 of the book used in the basic fluid power course.

SOURCE OF EVIDENCE

In-Class Exercise - Academic Direct

1.1.1.1

Expectations/Target for this Outcome

Not Reported this Period

EXPECTATIONS/TARGET FOR THIS OUTCOME Students will Identify 8 out of 10 fluid power valve diagrams.

FINDINGS/RESULTS

REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS

1.2

Program Learning Outcomes

Demonstrate understanding of electrical and electronics theory.

Objective: 3. Design and test digital logic circuits

1.2.1

Measures

DC Circuit Challenge software

The student will be able to troubleshoot defects (shorts and opens) in a series D.C. circuit.

METHODOLOGY*

ETCAI - D.C. Challenge software program. Series Troubleshooting 1 Taken during fundamentals of electricity.

SOURCE OF EVIDENCE

Direct - Internal - Academic Direct

1.2.1.1

Expectations/Target for this Outcome

Software Assessment **Exceeded**

EXPECTATIONS/TARGET FOR THIS OUTCOME	The students will complete the test with a time of less than 3 minutes with a score of greater than 90%.
FINDINGS/RESULTS	The average time for the first score was 9 minutes and 45 seconds with a score of 41% , this is normal for a pre-test. The post test score was 2 minutes six seconds with the final average score of 98.5%. One student made 90% which brought down the total
REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS	<p>The assessment software does a good job of documenting the students progress of simple troubleshooting.</p> <p>After a period of time the students will compete with each other to try to get the best score with the lowest time.</p>

1.2.2

Measures

Component Identification

The component Identification test is a series of different pictures of electronic parts that a technician should be able to recognize.

METHODOLOGY*

The test is a multiple-choice test administered on Blackboard. The students are exposed to different electronic parts by building different electronic circuits.

SOURCE OF EVIDENCE

Direct - Internal - Academic Direct

1.2.2.1

Expectations/Target for this Outcome

Partially Met

EXPECTATIONS/TARGET FOR THIS OUTCOME	The students are expected to score 80% or above.
FINDINGS/RESULTS	The students were given two tests. The first test resulted in an average score of 68%. The second test resulted in a average score of 84%
REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS	I was pleased with the results of the first test. Even though it was relatively low, I thought it was not bad due to the range of work experience of the students.

1.2.3 Measures

Digital Wiring

Build an Up-Down counter with a 4 bit magnitude compare. In this project, a rubric will be used to evaluate the circuit to make sure that it is functional, neat and organized using a clear schematic diagram.

METHODOLOGY*

A final lab test will be used to construct the circuit at the end of the Digital Logic class.

SOURCE OF EVIDENCE

In-Class Exercise - Academic Direct

1.2.3.1 Expectations/Target for this Outcome




Not Reported this Period

EXPECTATIONS/TARGET FOR THIS OUTCOME The student will score 80% or above on the project.

FINDINGS/RESULTS

REFLECTION ON FINDINGS AND RECOMMENDATIONS FOR NEXT STEPS

Project Attachments (3)

Attachments	File Size
 2020 Fluid power test scores.pdf	7KB
 Component identification 2021 test scores.pdf	49KB
 FundamentalsDCMeasureMents2020-2021-NO Names.docx	13KB

Fall 2020 Fluid power four-way valve test scores

Student #1 - 98%

Student #2 - 95%

Student #3 - 90%

Student #4 - 90%

Student #5 - 83%

Student #6 - 80%

Student #7 - 78%

Student #8 - 73%

Student #9 - 68%

83 % Average

**Industrial Control Systems - D.C. Circuit Challenges Software
Series Troubleshooting 1 2020-2021 9-30-2020**

Student #	First Time		Final Time	
	Time on task	Exercise Score	Time on task	Exercise Score
1	11:43	70%	1:32	100%
2	8:52	10%	1:04	100%
3	11:25	50%	2:06	100%
4	11:25	20%	1:49	100%
5	8:40	50%	1:46	100%
6	6:22	50%	3:02	90%
7	9:51	40%	3:27	100%
	Avg.= 9:45	Score 41%	Avg.= 2:06	98.5%

Component identification test scores

	<u>4/27/2021</u>	<u>4/29/2021</u>
Student #1	- 71.69%	94.44%
Student #2	- 88.67%	99.99%
Student #3	- 67.92%	90.56%
Student #4	- 50.94%	66.03%
Student #5	- 52.83%	75.46%
Student #6	- 67.92%	90.56%
Student #7	- 69.80%	88.67%
Student #8	- 86.78%	90.56%
Student #9	- 62.26%	71.69%
Student #10	- 58.49%	75.46%
	_____	_____
	68 % Average	84% Average