

Assurance of Student Learning Reflection 2024-2025	
Ogden College	School of Engineering and Applied Sciences
Computer Information Technology 555	
Yaser Mowafi	
Is this an online program? ☒ Yes ☐ No	Please make sure the Program Learning Outcomes listed match those in CourseLeaf. Indicate verification here ☒ Yes, they match! (If they don't match, explain on this page under Evaluation)

Instructions: For the 2024-25 assessment, we are asking you to reflect on the last three-year cycle rather than collect data. It's important to take time to look over the results from the last assessment cycle and really focus on a data-informed direction going forward. In collaboration with your assessment team and program faculty, review each submitted template from 2021-2024 and consider the following for each Program Learning Outcome, add your narrative to the template, and submit the draft to your **ASL Rep** by **May 15, 2025**.

Program Student Learning Outcome 1	
Program Student Learning Outcome	Demonstrate mastery of computer database concepts
Evaluation	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? The program learning outcome still relevant. Other things to examine: Is the outcome measurable? Yes. Is it double or triple barreled? No. Does it include measurable verbs following Bloom's Taxonomy? Yes. Do you have the appropriate numbers of SLOs to measure regularly? Yes. Given that this is mainly an online program, the program relies on measuring students' knowledge of utilizing skills and knowledge from prior courses in their degree program throughout capstone CIT 490 Senior Research course. The course allows students to contribute original work and ideas of CIT concepts that culminate in documentation that demonstrates their learning and understanding of these concepts. Program Learning Outcomes listed are hard to match those in CourseLeaf because ~70% of CIT students transfer with an AAS in IT, they only need to complete four foundation courses, of which only three represent the SLO concepts: database, computer networks, and technology management concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from the CIT program's six SLO concepts of which students are invited to pick among them.

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Program Student Learning Outcome 2	
Program Student Learning Outcome	Demonstrate mastery of computer network concepts
Evaluation	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? The program learning outcome still relevant. Other things to examine: Is the outcome measurable? Yes. Is it double or triple barreled? No. Does it include measurable verbs following Bloom's Taxonomy? Yes. Do you have the appropriate numbers of SLOs to measure regularly? Yes. Given that this is mainly an online program, the program relies on measuring students' knowledge of utilizing skills and knowledge from prior courses in their degree program throughout capstone CIT 490 Senior Research course. The course allows students to contribute original work and ideas of CIT concepts that culminate in documentation that demonstrates their learning and understanding of these concepts. Program Learning Outcomes listed are hard to match those in CourseLeaf because ~70% of CIT students transfer with an AAS in IT, they only need to complete four foundation courses, of which only three represent the SLO concepts: database, computer networks, and technology management concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from the CIT program's six SLO concepts of which students are invited to pick among them. Non-transfer students need to complete ten foundation courses, of which represent the five SLO concepts: database, computer networks, computer hardware, technology management, computer programming concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from technical domains of which students are invited to pick among them. The program validates student mastery of the CIT technical domains through an aggregate gain score of the CIT 490 Senior Research course outcomes assessments mapped to the CIT program mastery learning outcomes, similar to a certification exam. All CIT students must take CIT 490 Senior Research course, primarily oriented around producing a capstone project. The project culminates in documentation that demonstrates broader understanding and utilizing skills and knowledge from CIT program's SLOs.
Measurement Instruments	Are the measurement instruments actually measuring the outcome? Yes

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Results & Conclusion	<u>Results:</u> Are the results what was expected or not? What stood out in the assessment cycle over the past three years? Explain It is difficult to draw conclusions about each individual SLO assessment gain scores, since different students take different elective courses (five courses, one of which may be with MFGE prefix) that may or may not support each specific learning outcome. <u>Conclusions:</u> What worked? What didn't? Why do you think this? For example, maybe the content in one or more courses was modified; changed course sequence (detail modifications); changed admission criteria (detail modifications); changed instructional methodology (detail modifications); changed student advisement process (detail modifications); program suspended; changed textbooks; facility changed (e.g. classroom modifications); introduced new technology (e.g. smart classrooms, computer facilities, etc.); faculty hired to fill a particular content need; faculty instructional training; development of a more refined assessment tool. The CIT program has made some curriculum changes that went into effect in Fall 2024 reducing: - The 2+2 Transfer CIT major (for students with an Associate Degree in technology) to 30 hours from 36 hours--eliminating six credit hours of CIT electives (or two courses) - The traditional 60-hour CIT major to 48 hours-- eliminating 12 hours of CIT electives (four courses). The changes have made it more difficult to draw specific conclusions about the individual SLO assessment gain scores, since different students may take different elective courses (five courses, one of which may be with MFGE prefix) that may or may not support each specific learning outcome.
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Program Student Learning Outcome 3	
Program Student Learning Outcome	Demonstrate mastery of computer hardware concepts
Evaluation	

	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? The program learning outcome still relevant. Other things to examine: Is the outcome measurable? Yes. Is it double or triple barreled? No. Does it include measurable verbs following Bloom’s Taxonomy? Yes. Do you have the appropriate numbers of SLOs to measure regularly? Yes. Given that this is mainly an online program, the program relies on measuring students’ knowledge of utilizing skills and knowledge from prior courses in their degree program throughout capstone CIT 490 Senior Research course. The course allows students to contribute original work and ideas of CIT concepts that culminate in documentation that demonstrates their learning and understanding of these concepts. Program Learning Outcomes listed are hard to match those in CourseLeaf because ~70% of CIT students transfer with an AAS in IT, they only need to complete four foundation courses, of which only three represent the SLO concepts: database, computer networks, and technology management concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from the CIT program’s six SLO concepts of which students are invited to pick among them. Non-transfer students need to complete ten foundation courses, of which represent the five SLO concepta: database, computer networks, computer hardware, technology management, computer programming concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from technical domains of which students are invited to pick among them. The program validates student mastery of the CIT technical domains through an aggregate gain score of the CIT 490 Senior Research course outcomes assessments mapped to the CIT program mastery learning outcomes, similar to a certification exam. All CIT students must take CIT 490 Senior Research course, primarily oriented around producing a capstone project. The project culminates in documentation that demonstrates broader understanding and utilizing skills and knowledge from CIT program’s SLOs.																								
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Results & Conclusion	<u>Results:</u> Are the results what was expected or not? What stood out in the assessment cycle over the past three years? Explain It is difficult to draw conclusions about each individual SLO assessment gain scores, since different students take different elective courses (five courses, one of which may be with MFGE prefix) that may or may not support each specific learning outcome. <u>Conclusions:</u> What worked? What didn't? Why do you think this? For example, maybe the content in one or more courses was modified; changed course sequence (detail modifications); changed admission criteria (detail modifications); changed instructional methodology (detail modifications); changed student advisement process (detail modifications); program suspended; changed textbooks; facility changed (e.g. classroom modifications); introduced new technology (e.g. smart classrooms, computer facilities, etc.); faculty hired to fill a particular content need; faculty instructional training; development of a more refined assessment tool. The CIT program has made some curriculum changes that went into effect in Fall 2024 reducing: - The 2+2 Transfer CIT major (for students with an Associate Degree in technology) to 30 hours from 36 hours--eliminating six credit hours of CIT electives (or two courses) - The traditional 60-hour CIT major to 48 hours-- eliminating 12 hours of CIT electives (four courses). The changes have made it more difficult to draw specific conclusions about the individual SLO assessment gain scores, since different students may take different elective courses (five courses, one of which may be with MFGE prefix) that may or may not support each specific learning outcome.
<u>**IMPORTANT - Plans for Next Assessment Cycle:</u>	As we work hard to improve our assessment practices and make them more meaningful and effective, it's important each program craft a three-year plan for the following assessment cycle (2025-26, 2026-27, 2027-28) – this process assists in “closing the loop.” For example, you may decide to: • collect a more appropriate artifact • create new program outcomes • adjust targets because they are consistently exceeded or not met • need to reconstruct your curriculum map • sequencing of classes might need to be adjusted, or additional class(es) provided Whatever your plan is, provide a narrative, in future tense, that indicates how you will approach future assessments. You will be expected to implement any needed changes before the next assessment cycle. With the current course offering and staffing resources, the program may consider reviewing the current curriculum of the CIT program foundation courses, required courses by all CIT program students, to better map these courses with the the current program SLO concepts.

Program Student Learning Outcome 5	
Program Student Learning Outcome	Demonstrate mastery of technology management concepts
Evaluation	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? The program learning outcome still relevant. Other things to examine: Is the outcome measurable? Yes. Is it double or triple barreled? No. Does it include measurable verbs following Bloom's Taxonomy? Yes. Do you have the appropriate numbers of SLOs to measure regularly? Yes. Given that this is mainly an online program, the program relies on measuring students' knowledge of utilizing skills and knowledge from prior courses in their degree program throughout capstone CIT 490 Senior Research course. The course allows students to contribute original work and ideas of CIT concepts that culminate in documentation that demonstrates their learning and understanding of these concepts. Program Learning Outcomes listed are hard to match those in CourseLeaf because ~70% of CIT students transfer with an AAS in IT, they only need to complete four foundation courses, of which only three represent the SLO concepts: database, computer networks, and technology management concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from the CIT program's six SLO concepts of which students are invited to pick among them. Non-transfer students need to complete ten foundation courses, of which represent the five SLO concepts: database, computer networks, computer hardware, technology management, computer programming concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from technical domains of which students are invited to pick among them. The program validates student mastery of the CIT technical domains through an aggregate gain score of the CIT 490 Senior Research course outcomes assessments mapped to the CIT program mastery learning outcomes, similar to a certification exam. All CIT students must take CIT 490 Senior Research course, primarily oriented around producing a capstone project. The project culminates in documentation that demonstrates broader understanding and utilizing skills and knowledge from CIT program's SLOs.
Measurement Instruments	Are the measurement instruments actually measuring the outcome? Yes CIT 490 course grade is based on scores of five deliverables, each of which can be submitted twice with the second time incorporating feedback from the instructor on the first submission. The deliverables' assessments are based on the CIT program mastery learning outcomes and mapped to the following learning outcomes:

	- Identify, formulate, and solve information technology problems. - Apply information technology design to produce solutions that meet specified needs with consideration of public safety and welfare, as well as cultural, social, and economic factors. - Communicate effectively with a range of audiences. - Recognize ethical and professional responsibilities and make informed judgments, which must consider the impact of information technology solutions in economic and societal contexts. - Develop and conduct appropriate experimentation, analyze and interpret data, and use judgment to draw conclusions. If you change the SLO, is this still the best instrument to use? Is this a direct or indirect measure? Direct. Is your artifact appropriate? Yes. If not, what other options are there? NA For the period, the program relies on measuring students’ knowledge of utilizing skills and knowledge from prior courses in their degree program throughout capstone CIT 490 Senior Research course dleiverables’ assessment. Will the rise in the use of AI affect the assignment and measurement? Yes. If there are rubrics, do they need to be altered to better fit the learning outcome? No. Does the rubric (if using) work or does it need to be adjusted? No.																																												
Criteria & Targets	Does Criteria for Success (level of performance students will have achieved for your program to have been successful--ex., students will have earned 4/5 for documentation and citation on capstone essays) need to be changed? No. What about targets? Niether the target. For the period, CIT learning outcome assessments were delivered in CIT 490 Senior Research course. For success, a minimum of 70% score should be achieved, with a set target of 75% of the students should have a 80% score or better. <table><tr><td>Percentiles</td><td>Smallest</td><td></td><td></td></tr><tr><td>1%</td><td>46.5</td><td>46.5</td><td></td></tr><tr><td>5%</td><td>77</td><td>74.5</td><td></td></tr><tr><td>10%</td><td>77</td><td>74.5</td><td>Students count 66</td></tr><tr><td>25%</td><td>81.5</td><td>77</td><td>Sum of Wgt. 66</td></tr><tr><td>50%</td><td>83</td><td></td><td>Mean 83</td></tr><tr><td></td><td></td><td>Largest</td><td>Std. Dev. 6.0517</td></tr><tr><td>75%</td><td>85.5</td><td>91.5</td><td></td></tr><tr><td>90%</td><td>88.5</td><td>91.5</td><td>Variance 36.62308</td></tr><tr><td>95%</td><td>91.5</td><td>91.5</td><td>Skewness -3.292882</td></tr><tr><td>99%</td><td>91.5</td><td>91.5</td><td>Kurtosis 21.21399</td></tr></table> If you have successfully made your targets consistently, consider a more challenging target. The target is modestly achieved at this point.	Percentiles	Smallest			1%	46.5	46.5		5%	77	74.5		10%	77	74.5	Students count 66	25%	81.5	77	Sum of Wgt. 66	50%	83		Mean 83			Largest	Std. Dev. 6.0517	75%	85.5	91.5		90%	88.5	91.5	Variance 36.62308	95%	91.5	91.5	Skewness -3.292882	99%	91.5	91.5	Kurtosis 21.21399
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Results & Conclusion	Results: Are the results what was expected or not? What stood out in the assessment cycle over the past three years? Explain It is difficult to draw conclusions about each individual SLO assessment gain scores, since different students take different elective courses (five courses, one of which may be with MFGE prefix) that may or may not support each specific learning outcome.																																												

	<u>Conclusions:</u> What worked? What didn't? Why do you think this? For example, maybe the content in one or more courses was modified; changed course sequence (detail modifications); changed admission criteria (detail modifications); changed instructional methodology (detail modifications); changed student advisement process (detail modifications); program suspended; changed textbooks; facility changed (e.g. classroom modifications); introduced new technology (e.g. smart classrooms, computer facilities, etc.); faculty hired to fill a particular content need; faculty instructional training; development of a more refined assessment tool. The CIT program has made some curriculum changes that went into effect in Fall 2024 reducing: - The 2+2 Transfer CIT major (for students with an Associate Degree in technology) to 30 hours from 36 hours--eliminating six credit hours of CIT electives (or two courses) - The traditional 60-hour CIT major to 48 hours-- eliminating 12 hours of CIT electives (four courses). The changes have made it more difficult to draw specific conclusions about the individual SLO assessment gain scores, since different students may take different elective courses (five courses, one of which may be with MFGE prefix) that may or may not support each specific learning outcome.
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Program Student Learning Outcome 6	
Program Student Learning Outcome	Demonstrate mastery of computer programming concepts

Evaluation	Using the last three assessment cycles, is this program learning outcome still relevant, or should it be changed? The program learning outcome still relevant. Other things to examine: Is the outcome measurable? Yes. Is it double or triple barreled? No. Does it include measurable verbs following Bloom's Taxonomy? Yes. Do you have the appropriate numbers of SLOs to measure regularly? Yes. Given that this is mainly an online program, the program relies on measuring students' knowledge of utilizing skills and knowledge from prior courses in their degree program throughout capstone CIT 490 Senior Research course. The course allows students to contribute original work and ideas of CIT concepts that culminate in documentation that demonstrates their learning and understanding of these concepts. Program Learning Outcomes listed are hard to match those in CourseLeaf because ~70% of CIT students transfer with an AAS in IT, they only need to complete four foundation courses, of which only three represent the SLO concepts: database, computer networks, and technology management concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from the CIT program's six SLO concepts of which students are invited to pick among them. Non-transfer students need to complete ten foundation courses, of which represent the five SLO concepts: database, computer networks, computer hardware, technology management, computer programming concepts. The rest (five courses, one of which may be with MFGE prefix) are assembled elective grab bag of courses from technical domains of which students are invited to pick among them. The program validates student mastery of the CIT technical domains through an aggregate gain score of the CIT 490 Senior Research course outcomes assessments mapped to the CIT program mastery learning outcomes, similar to a certification exam. All CIT students must take CIT 490 Senior Research course, primarily oriented around producing a capstone project. The project culminates in documentation that demonstrates broader understanding and utilizing skills and knowledge from CIT program's SLOs.
Measurement Instruments	Are the measurement instruments actually measuring the outcome? Yes CIT 490 course grade is based on scores of five deliverables, each of which can be submitted twice with the second time incorporating feedback from the instructor on the first submission. The deliverables' assessments are based on the CIT program mastery learning outcomes and mapped to the following learning outcomes: - Identify, formulate, and solve information technology problems. - Apply information technology design to produce solutions that meet specified needs with consideration of public safety and welfare, as well as cultural, social, and economic factors. - Communicate effectively with a range of audiences. - Recognize ethical and professional responsibilities and make informed judgments, which must consider the impact of information technology solutions in economic and societal contexts. - Develop and conduct appropriate experimentation, analyze and interpret data, and use judgment to draw conclusions. If you change the SLO, is this still the best instrument to use? Is this a direct or indirect measure? Direct.

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To add more outcomes, if needed, select the table above and copy & paste below.