

Assessment Cycle 2025 – 2026

MS in Computer Information Systems (597)

Division: School of Business, College of Business and Technology

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Northwestern Mission. Northwestern State University is a responsive, student-oriented institution committed to acquiring, creating, and disseminating knowledge through innovative teaching, research, and service. With its certificate, undergraduate, and graduate programs, Northwestern State University prepares its increasingly diverse student population to contribute to an inclusive global community with a steadfast dedication to improving our region, state, and nation.

College of Business and Technology Mission. The College of Business and Technology provides a high quality – market responsive business and technology education, preparing our diverse student population for successful careers and enriched lives in the public, private and nonprofit sectors, and enhancing our students' academic experiences through our research and scholarly activities.

School of Business Mission. The mission of the School of Business is to provide our diverse student population with innovative skills in business and technology to prepare them for successful careers and responsible citizenship roles to have a positive societal impact in the world of business. (Adopted 2017-2018 – mission wording was revised to include “our diverse population”; Adopted 2020-2021 – mission wording was revised to reflect societal impact)

As such, NSU's School of Business is committed to ...

Providing students with a business education. This means that we strive to provide students with opportunities to become effective communicators, critical thinkers, develop knowledge across business disciplines, and global perspective.

Preparing them for successful careers and citizenship roles. This means that we provide educational experience and opportunities.

...In the world of Business. This implies developing a global perspective that involves managing activities that foster the transfer of goods and services in organizations of all types wherever found.

Computer Information Systems Program Mission Statement: The mission of the MS in Computer Information Systems in the School of Business at Northwestern State is to prepare our diverse student populations for careers as

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information systems and technology professionals in the public, private and nonprofit sectors, and/or for advancement into doctoral programs. This purpose will be met by providing quality online and face-to-face business and technology instruction and academic support with high academic standards, superior teaching, quality research, significant service, and effective use of technology for the citizens of our region. (Approved by CIS faculty on 6/9/2021).

Purpose: To prepare students for careers as business professionals in the public, private and nonprofit sectors, and/or for advancement into graduate programs.

Methodology: The assessment process for the School of Business includes:

- (1) The MS in Computer Information Systems collects SLO data each year.
- (2) A variety of assessment tools (quantitative, qualitative, direct and indirect) are used to collect data for analysis for each of the Student Learning Outcomes (SLOs).
- (3) Data is collected and returned to the SLO Chairs.
- (4) Summary results are analyzed to determine if students have achieved or “met” the measurable outcomes. When necessary, proposed action steps are created by each SLO chairman in collaboration with the SLO committee members, faculty teaching core courses, and the program coordinator.
- (5) Following discussion and review by appropriate faculty, if needed, proposed recommended action steps, and recommended changes are implemented by the faculty responsible for teaching the courses tied to the SLO.
- (6) Individual meetings are held with faculty and staff as required.
- (7) In consultation with the staff and senior leadership, proposed changes to measurable outcomes, assessment tools for the next assessment period and, where needed, service changes will be recommended.
- (8) These proposed recommended action steps and recommended changes are implemented by the faculty responsible for teaching the courses tied to the SLO.

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Student Learning Outcomes (SLOs):

SLO 1. Demonstrate discipline-specific content knowledge. Students should be able to demonstrate understanding of key concepts and theories in areas of CIS as well as demonstrate the ability to draw on knowledge and insights from a variety of disciplines when analyzing and formulating solutions to problems and opportunities.

Course Map (Tied to course syllabus objectives):

CIS 5950 – Research Project and/or Thesis

Measure 1.1 (Direct – Exam; Entrance Exam and Exit Exam)

Details/Description: The unit strives to give students the baseline knowledge exam prior to registration for their first semester. This exam covers key concepts and theories in Computer Information Systems. The exam included multiple choices questions as well as short answer questions. The questions are grouped into categories: Programming, Software Applications, Networking, Cyber Security, Databases, Data Analysis, and Project Management. The exam also includes questions related to analytical techniques and research questions.

In CIS 5950, students will again take the MS in Computer Information Systems knowledge exam. These students will be taking the exam in their last semester (or close to it) and their attempt should reflect the knowledge they have gained through the program.

Acceptable Target: For the exit exam, in each category, 75% of students will get all answers correct.

Ideal Target: For the exit exam, in each category, 95% of students will get all answers correct.

Implementation Plan (timeline): The entrance exam measurement is completed as students are entering the program and registering for classes. Students can enter the program in the spring, summer, or fall semesters.

The exit exam measure should be completed each semester CIS 5950 is offered.

Key/Responsible Personnel: The MS in CIS Coordinator is responsible for the administration of the entrance exam. The School of Business faculty teaching CIS 5950 will be responsible for administering the exit exam.

Finding: The acceptable target was not met in every category. The ideal target was not met in every category.

Analysis: In AC 2024-2025, the target was not met. The table below shows the results for the 2024-2025 assessment cycle for Measure 1.1 (entrance exam).

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Table 1. Measure 1.1 - AC 2024-2025 Baseline Knowledge Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Programming	0%	0%	100%
Software Applications	0%	0%	100%
Networking	0%	100%	0%
Cyber Security	0%	50%	50%
Databases	100%	0%	0%
Data Analysis	100%	0%	0%
Project Management	50%	50%	0%

Two students took the baseline knowledge exam so the analysis should be considered with this limited response. The table below shows the results for the 2025-2026 assessment cycle for Measure 1.1 (entrance exam).

Table 2. Measure 1.1 - AC 2025-2026 Baseline Knowledge Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Programming	0%	100%	0%
Software Applications	0%	50%	50%
Networking	0%	100%	0%
Cyber Security	0%	0%	100%
Databases	100%	0%	0%
Data Analysis	100%	0%	0%
Project Management	100%	0%	0%

The table below shows the results for the 2024-2025 assessment cycle for measure 1.1 (exit exam).

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Table 3. Measure 1.1 - AC 2024-2025 Exit Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Programming	0%	33%	67%
Software Applications	33%	0%	67%
Networking	0%	67%	33%
Cyber Security	0%	33%	67%
Databases	33%	33%	33%
Data Analysis	33%	33%	33%
Project Management	33%	67%	0%

Three students completed the exit exam. The acceptable target and the ideal target were **not** met for any of the categories. As with previous years, some of the percentages require further explanation. In the areas of Networking, Cyber Security, Databases, and Data Analysis, some of the questions require multiple answers. Students are often answering part of these questions correctly but not answering all components correctly.

As compared to the entry exam, students did the same or better in Networking, Cyber Security, Databases, Data Analysis, and Project Management. While being cognizant of the small number of students represented by the results, the higher exit exam scores as compared to the lower entry exam scores are an indicator of learning in the program. Unfortunately, students did worse on Programming and Software Applications on the exit exam than they did on the entry exam.

Based on the analysis of the AC 2024- 2025 results, the faculty implemented the following changes in AC 2025-2026 to drive the cycle of improvement. In AC 2025-2026 year, a faculty member reviewed the course material to ensure that the topics being covered on the exit exam are still covered in those classes. Updates were made to the exit exam to align with current course topics. The faculty member overseeing the Networking and Cyber Security classes continued to offer synchronous online lab times to assist students in learning the material. As students have normally done well in the Programming and Software Applications categories, no changes were made yet. One student was affecting the results so the results will be monitored in future years to ensure a new pattern is not developing.

As a result of these changes, in 2025-2026, the target was **not met**. The table below shows the results for the 2025-2026 assessment cycle for Measure 1.1.

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Table 4. Measure 1.1 - AC 2025-2026 Exit Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Programming	0%	0%	100%
Software Applications	0%	14%	86%
Networking	0%	14%	86%
Cyber Security	0%	0%	100%
Databases	0%	43%	57%
Data Analysis	0%	100%	0%
Project Management	0%	86%	14%

Seven students completed the exit exam. The acceptable target and the ideal target were **not** met for all of the categories. The ideal target was met for the areas of Programming and Cyber Security. The acceptable target was met for the areas of Programming, Software Applications, Networking, and Cyber Security. As with previous years, some of the percentages require further explanation. In the areas of Networking, Cyber Security, Databases, Data Analysis, and Project Management some of the questions require multiple answers. Students are often answering part of these questions correctly but not answering all components correctly.

As compared to the entry exam, students did the same or better in every single category. While being cognizant of the small number of students represented by the results, the higher exit exam scores as compared to the lower entry exam scores are an indicator of learning in the program. In contrast to the AC 2024-2025 results, there were no areas where students did worse on the exit exam than they did on the entrance exam.

Decision:

In 2025-2026, the target was **not met**.

Based on the analysis of the AC 2025- 2026 results, the faculty will implement the following changes in AC 2026-2027 to drive the cycle of improvement. The two areas with the lowest success on the exit exam were the Data Analysis and Project Management areas. The faculty member overseeing the CIS 5840 class (Decision Support Systems) will incorporate more resources, such as videos, that directly address some of the areas on the exit exam. Additionally, the faculty member overseeing the Project Management class will also intensively look at the current questions on the exit exam and ensure they still align with the topics being covered in the Project Management classes.

These changes will help improve the students' ability to demonstrate discipline-specific knowledge thereby continuing to push the cycle of improvement forward.

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SLO 2. Analytical Techniques. Students must be able to apply appropriate analytical techniques to identify and frame problems, generate, and compare alternatives, use knowledge of analytic processes and reasoning skills to optimize organizational performance, and understand and use current organizational technologies.

Course Map: Tied to course syllabus objectives. CIS 5950 – Research Project and/or Thesis

Measure 2.1 (Direct – Exam; Entrance Exam and Exit Exam)

Details/Description: The unit strives to give students the baseline knowledge exam prior to registration for their first semester. This exam covers key concepts and theories in Computer Information Systems. The exam included multiple choices questions as well as short answer questions. The questions are grouped into categories: Programming, Software Applications, Networking, Cyber Security, Databases, Data Analysis, and Project Management. The exam also includes questions related to analytical techniques and research questions.

In CIS 5950, students will again take the MS in Computer Information Systems knowledge exam. These students will be taking the exam in their last semester (or close to it) and their attempt should reflect the knowledge they have gained through the program.

Acceptable Target: For the exit exam, in the Analytical Techniques category, 75% of students will get all answers correct.

Ideal Target: For the exit exam, in the Analytical Techniques category, 95% of students will get all answers correct.

Implementation Plan (timeline): The entrance exam measurement is completed as students are entering the program and registering for classes. Students can enter the program in the spring, summer, or fall semesters.

The exit exam measure should be completed each semester CIS 5950 is offered.

Key/Responsible Personnel: The MS in CIS Coordinator is responsible for the administration of the entrance exam. The School of Business faculty teaching CIS 5950 will be responsible for administering the exit exam.

Finding: The acceptable target was not met. The ideal target was not met.

Analysis: In AC 2024-2025, the target was not met. The table below shows the results for the 2024-2025 assessment cycle for Measure 2.1 (entrance exam).

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Table 5. Measure 2.1 - AC 2024-2025 Baseline Knowledge Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Analytical Techniques	50%	0%	50%

Two students took the baseline knowledge exam so the analysis should be considered with this limited response. This cohort did slightly improve as compared to the previous year's cohort.

The table below shows the results for the 2025-2026 assessment cycle for Measure 2.1 (entrance exam).

Table 6. Measure 2.1 - AC 2025-2026 Baseline Knowledge Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Analytical Techniques	100%	0%	0%

Two students took the baseline knowledge exam so the analysis should be considered with this limited response. This cohort did worse compared to the previous year's cohort.

The table below shows the results for the 2024-2025 assessment cycle for Measure 2.1 (exit exam).

Table 7. Measure 2.1 - AC 2024-2025 Knowledge Exit Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Analytical Techniques	0%	33%	67%

Three students took the knowledge exit exam. The acceptable target was **not met**. The ideal target was also **not met**. The scores remained the same as the previous year.

In comparison to the baseline knowledge entry exam results, the scores have still improved. This improvement in scores is likely a reflection of learning in the CIS 5900 and CIS 5950 classes.

Based on the analysis of the AC 2024-2025 results, the faculty implemented the following changes in AC 2025-2026 to drive the cycle of improvement. The faculty member teaching CIS 5900 incorporated additional resources regarding statistical techniques and their application to research problems. Specifically, the faculty members provided videos explaining the various statistical techniques.

Additionally, the CIS faculty members made a change which will eventually allow for more time to be spent on different aspects of research. Currently, students take CIS 5900 which provides a research foundation and then take CIS 5950 to complete a research project, research paper, or thesis. However, students struggle to complete their CIS 5950

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work during one semester. Thus, the CIS faculty incorporated an additional research class into the curriculum effective 2026-2027. This inclusion necessitated other changes that were taken to the Curriculum Review Committee and Graduate Council during the 2025-2026 academic year. The faculty members teaching those classes can split out the various research components into three classes which will allow for more time to conduct the research as well as more time to review important aspects of the research.

As a result of these changes, in 2025-2026, the target was **not met**. The table below shows the results for the 2025-2026 assessment cycle for Measure 2.1 (exit exam).

Table 8. Measure 2.1 - AC 2025-2026 Knowledge Exit Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Analytical Techniques	0%	29%	71%

Seven students took the knowledge exit exam. The acceptable target was **not met**. The ideal target was also **not met**. However, the scores increased slightly compared to the previous year.

In comparison to the baseline knowledge entry exam results, the scores have still improved. This improvement in scores is likely a reflection of learning in the CIS 5900 and CIS 5950 classes.

Decision:

In 2025-2026, the target was **not met**.

Based on the analysis of the AC 2025-2026 results, the faculty will implement the following changes in AC 2026-2027 to drive the cycle of improvement. While some students will still take only CIS 5900 and CIS 5950 due to being in previous catalogs, faculty will begin the process of dividing the course material among three classes for the cohorts of students entering in 2026-2027 and beyond. Faculty members will work on setting up the classes to ensure more thorough coverage of statistical techniques. Additionally, the faculty member teaching CIS 5840 (Decision Support Systems) will work to include additional resources, such as videos, for students in that class. Students would then be able to take this knowledge of statistics from CIS 5840 and apply it to the research classes in the future.

These changes will improve the students' ability to apply appropriate analytical techniques to identify and frame problems and generate and compare alternatives thereby continuing to push the cycle of improvement forward.

Measure 2.2 (Direct – Student Artifact; CIS 5900 Analytical Assignment)

Details/Description: In CIS 5900, students will identify and apply appropriate analytical techniques to achieve the aim of the student. Analytical techniques include independent samples t-test, multivariate regression, and two chosen from paired sample t-test, ANOVA, Wilcoxon signed-rank test, Pearson correlation, Kruskal Willis test, and Spearman's correlation coefficient. The instructor of the class will utilize a rubric to determine the extent to which the students are able to apply appropriate analytical techniques.

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Acceptable Target: Based on the rubric, 75% of students will score at the highest level for applying appropriate analytical techniques.

Ideal Target: Based on the rubric, 90% of students will score at the highest level for applying appropriate analytical techniques.

Implementation Plan (timeline): This measure should be completed each semester CIS 5950 is offered.

Key/Responsible Personnel: The School of Business faculty teaching CIS 5900 will be responsible for administering the exam.

Finding: Acceptable target was met. Ideal target was met.

Analysis: In AC 2024-2025, the target was not met. In CIS 5900, three students all received a grade of 100% on the rubric associated with identifying and applying appropriate analytical techniques to achieve the aim of the student. However, four students did not receive a grade of 100% with grades varying from 82% to 90% for these students. The students continued to try to identify and apply analytical techniques including independent samples t-test, multivariate regression, and two techniques chosen from paired-sample t-test, ANOVA, Wilcoxon signed-rank test, Pearson correlation, Kruskal-Willis test, and Spearman's correlation coefficient.

Students were generally successful in being able to describe the statistical techniques. However, students had more issues with choosing the correct statistical technique for a research problem and applying the chosen statistical technique appropriately.

Based on the analysis of the AC 2024-2025 results, the faculty made the following changes in AC 2025-2026 to drive the cycle of improvement. The faculty member teaching CIS 5900 incorporated additional resources regarding statistical techniques and their application to research problems. Specifically, the faculty member provided additional videos explaining the various statistical techniques. Additionally, the faculty member took the original assignment and split it between two separate assignments on two separate weeks allowing for time to analyze and complete the different components of the assignment.

Additionally, the CIS faculty members made a change which will eventually allow for more time to be spent on different aspects of research. Previously, students took CIS 5900 which provides a research foundation and then took CIS 5950 to complete a research project, research paper, or thesis. However, students struggled to complete their CIS 5950 work during one semester. Thus, the CIS faculty incorporated an additional research class into the curriculum. This inclusion necessitated other changes that has to be taken to the Curriculum Review Committee and Graduate Council during the 2025-2026 academic year. These changes become effective for graduate students entering the curriculum in 2026-2027. The faculty members teaching those classes can split out the various research components into three classes which will allow for more time to conduct the research as well as more time to review important aspects of the research.

As a result of these changes, in AC 2025-226, the target was met. Four students completed the assignment in CIS 5900, and all four students earned 100% on the

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assignment. These changes had a direct impact on the students' ability to apply appropriate analytical techniques to identify and frame problems and generate and compare alternatives.

Decision:

In AC 2025-2026, the target was met.

Based on the analysis of the AC 2025-2026 results, the faculty will implement the following changes in AC 2026-2027 to drive the cycle of improvement. The faculty member teaching CIS 5900 will continue to refine the course to ensure all resources are supporting the students' understanding of these analytical techniques. Additionally, the faculty member teaching CIS 5840 (Decision Support Systems) will work to include additional resources, such as videos, for students in that class. Students would then be able to take this knowledge of statistics from CIS 5840 and apply it to the research classes in the future.

These changes will improve the students' ability to apply appropriate analytical techniques to identify and frame problems and generate and compare alternatives thereby continuing to push the cycle of improvement forward.

SLO 3. Research Proficiency. Students will demonstrate proficiency in evaluating and analyzing CIS research and being able to frame their own research questions.

Course Map: Tied to course syllabus objectives.

CIS 5900 – Research Methods in Computer Information Systems CIS

5950 – Research Project and/or Thesis

Measure 3.1 (Direct – Exam; Entrance Exam and Exit Exam)

Details/Description: The unit strives to give students the baseline knowledge exam prior to registration for their first semester. This exam covers key concepts and theories in Computer Information Systems. The exam included multiple choices questions as well as short answer questions. The questions are grouped into categories: Programming, Software Applications, Networking, Cyber Security, Databases, Data Analysis, and Project Management. The exam also includes questions related to analytical techniques and research questions.

In CIS 5950, students will again take the MS in Computer Information Systems knowledge exam. These students will be taking the exam in their last semester (or close to it) and their attempt should reflect the knowledge they have gained through the program.

Acceptable Target: In the Research category on the exit exam, 75% of students will get all answers correct.

Ideal Target: In the Research category on the exit exam, 95% of students will get all answers correct.

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Implementation Plan (timeline): The entrance exam measurement is completed as students are entering the program and registering for classes. Students can enter the program in the spring, summer, or fall semesters.

The exit exam measure should be completed each semester CIS 5950 is offered.

Key/Responsible Personnel: The MS in CIS Coordinator is responsible for the administration of the entrance exam. The School of Business faculty teaching CIS 5950 will be responsible for administering the exit exam.

Finding: Acceptable target was not met. Ideal target was not met.

Analysis: In AC 2024-2025, the target was not met. The table below shows the results for the 2024-2025 assessment cycle for Measure 3.1 (entrance exam).

Table 9. Measure 3.1 - AC 2024-2025 Baseline Knowledge Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Research	0	100%	0%

Two students took the baseline knowledge exam so the analysis should be considered with this limited response. This cohort maintained the results from the previous year's cohort.

The table below shows the results for the 2025-2026 assessment cycle for Measure 3.1 (entrance exam).

Table 10. Measure 3.1 - AC 2025-2026 Baseline Knowledge Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Research	50%	0%	50%

Two students took the baseline knowledge exam so the analysis should be considered with this limited response. This cohort maintained the results from the previous year's cohort as far as the average score although there was a split in the results this year.

The table below shows the results for the 2024-2025 assessment cycle for Measure 3.1 (exit exam).

Table 11. AC 2024-2025 Knowledge Exit Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Research	0%	33%	67%

Three students took the exit exam. Two students got both answers correct while one student got one answer correct. The 2024-2025 results mirror the AC 2023-2024 results

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and mean the target was not met. However, the students were not far from meeting the targets. The one student got one answer correct. On the other question, the student needed to clearly define a quantitative research question. The percentages still represent an increase from the entry exam results.

Based on the analysis of the AC 2024-2025 results, the faculty implement the following changes in AC 2025-2026 to drive the cycle of improvement. The faculty member teaching the CIS 5900 class provided additional resources specifically focused on the problem statement and the development of research questions. These resources helped guide students in the creation of their research questions. Additionally, the submitted change regarding the creation of a new research class will eventually allow for more in-depth study on research questions.

As a result of these changes, in AC 2025-2026, the target was **not met**. The table below shows the results for the 2025-2026 assessment cycle for Measure 3.1 (exit exam).

Table 12. Measure 3.1 - AC 2025-2026 Knowledge Exit Exam Results.

Area	% with No Answers Correct	% with Some Answers Correct	% with All Answers Correct
Research	0%	43%	57%

Seven students took the exit exam. Four students got both answers correct while three students got one answer correct. The 2025-2026 results show a slight decrease from the AC 2024-2025 results and means the target was not met. However, the students were not far from meeting the targets. The biggest issue was the correct formulation of quantitative research questions versus qualitative research questions. The percentages still represent an increase from the entry exam results.

Decision:

In 2025-2026, the target was **not met**.

Based on the analysis of the AC 2024-2025 results, the faculty will implement the following changes in AC 2025-2026 to drive the cycle of improvement. While some students will still take only CIS 5900 and CIS 5950 due to being in previous catalogs, faculty will begin the process of dividing the course material among three classes for the cohorts of students entering in 2026-2027 and beyond. Faculty members will work on setting up the classes to ensure more thorough coverage of the proper formulation of quantitative and qualitative research questions. Additionally, the faculty member teaching CIS 5900 will continue to refine the resources available in that class.

These changes will improve the student's ability to demonstrate proficiency in evaluating and analyzing CIS research and being able to frame their own research questions thereby continuing to push the cycle of improvement forward.

Measure 3.2 (Direct – Student Artifact; CIS 5900 Research Proficiency/Alignment Assignment)

Details/Description: In CIS 5900, students will complete an assignment related to various aspects of the research process. The instructor of the class will utilize a rubric to

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determine the extent to which the students are proficient in the following areas: research questions, problem statement, background of the problem, purpose statement, conceptual framework, significance of the study, and synthesis of knowledge.

Acceptable Target: Based on the rubric, students will score at an average level of 75% or higher on the rubric related to research proficiency and alignment.

Ideal Target: Based on the rubric, students will score at an average level of 90% or higher on the rubric related to research proficiency and alignment.

Implementation Plan (timeline): This measure should be completed each semester CIS 5900 is offered.

Key/Responsible Personnel: The School of Business faculty teaching CIS 5900 will be responsible for administering the exam.

Finding: Acceptable target was met. Ideal target was not met.

Analysis:

In AC 2024-2025 the acceptable target was met. However, the ideal target was not met. Four of the seven students scored at or above the 90% ideal target while one student scored below the 75% acceptable target. The overall average was 88% which was an increase from the 75% average in 2023-2024.

The rubric consisted of analysis based on research questions, problem statement, background of the problem, purpose statement, conceptual framework, significance of the study, and synthesis of knowledge. In contrast to last year, no students received deductions for the conceptual framework. However, three students received deductions related to synthesis of knowledge. Two deductions also occurred in the research questions, background of the problem, and purpose statement categories while one deduction occurred in the significance of the study and problem statement categories.

Based on the analysis of the AC 2024-2025 results, the faculty made the following changes in AC 2025-2026 to drive the cycle of improvement. The faculty member teaching CIS 5900 incorporated additional resources regarding the various aspects of a research paper. Additionally, the aforementioned changes regarding an additional research class will eventually allow for more in-depth study on the various

components of a research paper.

As a result of these changes, in AC 2025-2026, the acceptable target was met, and the ideal target was not met. Two of the four students in the class scored above the 90% ideal target while one student scored below the 75% acceptable target. The overall average was 87% which was a slight decrease from the 88% average in 2024-2025.

Deductions for this assignment were related to the areas of research questions, problem statement, background of the problem, and the conceptual framework.

Decision: In AC 2025-2026, the acceptable target was met, and the ideal target was not met.

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Based on the analysis of the AC 2025-2026 results, the faculty will implement the following changes in AC 2026-2027 to drive the cycle of improvement. The faculty member overseeing CIS 5900 will continue to refine and offer additional resources in the various areas supporting research proficiency, particularly in the areas where students received deductions.

These changes will improve the student's ability to demonstrate proficiency in evaluating and analyzing CIS research, thereby continuing to push the cycle of improvement forward.

Measure 3.3 (Direct – Student Artifact; CIS 5900 Research Question Assignment)

Details/Description: In CIS 5900, students will complete an assignment related to their proficiency in being able to create appropriate research questions. The instructor of the class will utilize a rubric to determine the extent to which the students are able to design their own research questions.

Acceptable Target: Based on the rubric, students will score at an average level of 75% or higher on the rubric related to designing their research questions.

Ideal Target: Based on the rubric, students will score at an average level of 90% or higher on the rubric related to designing their research questions.

Implementation Plan (timeline): This measure should be completed each semester CIS 5900 is offered.

Key/Responsible Personnel: The School of Business faculty teaching CIS 5900 will be responsible for administering the exam.

Finding: Acceptable target was met. Ideal target was not met.

Analysis:

In AC 2024-2025, the acceptable target was met. The ideal target was also met.

Seven students took the CIS 5900 class and completed this assignment. Three students earned 50 out of 50 points on the assignment. Two additional students scored a 94% while the remaining two students scored 70% and 82%. Thus, the overall average was 91%.

While this average was high enough to meet the targets, the average was a decrease from last year. Students had deductions related to three main areas. First, some research questions were phrased to have a “yes” or “no” answer. Other research questions needed to be rephrased so they were clearly quantitative or qualitative. Finally, some research questions were too broad and needed to be broken into multiple research questions.

Based on the analysis of the AC 2024-2025 results, the faculty made the following changes in AC 2025-2026 to drive the cycle of improvement. The faculty member teaching the CIS 5900 class provided additional resources specifically focused on the three areas noted in the analysis. These resources helped guide students in the creation of their research questions. Additionally,

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the planned change regarding the creation of a new research class will eventually allow for more in-depth study on research questions.

As a result of these changes, in AC 2025-2026, the acceptable target was met, but the ideal target was not met. Four students took the CIS 5900 class and completed the assignment. One student earned 50 out of 50 points on the assignment. The other students scored a 94%, a 88%, and a 70%. Thus, the overall average was 88%.

While this average was high enough to meet the acceptable target, the average was a slight decrease from last year. The main concern was that some research questions were too broad and needed to be broken into multiple research questions. An individual student also had issues with phrasing leading to a “yes” or “no” answer while another student needed to more clearly explain how their research question was significant to their area of study.

Decision:

In 2025-2026, the acceptable target was **met**. The ideal target was **not met**.

Based on the analysis of the AC 2025-2026 results, the faculty will implement the following changes in AC 2026-2027 to drive the cycle of improvement. The CIS 5900 faculty member will continue to refine the resources to better explain expectations with regard to research questions with a specific focus on students focusing their research questions.

These changes will improve the students' ability to frame their own research questions thereby continuing to push the cycle of improvement forward.

Comprehensive Summary of Key evidence of improvement based on the analysis of results.

The following reflects the changes implemented to drive the continuous process of seeking improvement in AC 2025-2026. These changes are based on the knowledge gained through the analysis of the AC 2024-2025 results.

Based on the AC 2024-2025 results, the CIS faculty made several changes as follows:

- A faculty member reviewed the course material, specifically in the Data Analytics area, and made updates to the exit exam to align the material with the redesigned Data Analytics course.
- A faculty member in the Networking and Cyber Security area continued to offer additional lab times for students to attend and ask questions regarding the material.
- The faculty member teaching CIS 5900 incorporated additional resources regarding statistical techniques and their application to research problems. Additionally, the faculty member took the original assignment and split it between two separate assignments on two separate weeks allowing for time to analyze and complete the different components of the assignment.
- The faculty member teaching CIS 5900 also incorporated additional resources specifically focused on the problem statement and the development of research questions as well as other aspects of a research paper. These

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resources helped guide students in the creation of their research questions.

- The CIS faculty took a curriculum change to the Curriculum Review Council and Graduate Council to add an additional research class to the curriculum effective 2026-2027. The faculty members teaching the research classes can now split out the various research components into three classes allowing for more time to conduct research as well as more time to review important aspects of research.

These changes have produced mixed results in the AC 2025-2026. The table below shows the results of the measurements in AC 2025-2026.

Table 13. Summary of Measurements in AC 2025-2026.

Measurement	Acceptable Target	Actual Result	Met/ Not Met
Measure 1.1 – Entrance Exam and Exit Exam (Discipline Specific Content Knowledge)	75% All Answers Correct	100% Programming 86% Software Application 86% Networking 100% Cyber Security 57% Databases 0% Data Analysis 14% Project Management	Not Met
Measure 2.1 – Entrance Exam and Exit Exam (Analytical Techniques)	75% All Answers Correct	71% All Answers Correct	Not Met
Measure 2.2 – CIS 5900 Analytical Assignment	75% Score at Highest Level	100% Score at Highest Level	Met
Measure 3.1 – Entrance Exam and Exit Exam (Research)	75% All Answers Correct	57% All Answers Correct	Not Met
Measure 3.2 – Research Proficiency/Alignment Assignment	Average Score of 75% or Higher	Average score of 87%	Met
Measure 3.3 – Research Question Assignment	Average Score of 75% or Higher	Average score of 88%	Met

For some measurements, the results may just be delayed. For example, while the CIS faculty have made curriculum changes, those changes affect new students coming into the program. Existing students still complete the classes defined in the curriculum in which they entered. In other areas, we will continue to monitor results due to the low enrollment in the program as well as to see the hopeful improvement made as the CIS faculty implement the changes outlined in the plan of action moving forward.

Plan of Action moving forward.

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Based on analysis of the AC 2025-2026 results, the Computer Information Systems area has made decisions to improve student learning and success.

The faculty member overseeing the CIS 5840 (Decision Support Systems) will incorporate more resources, such as videos, that directly address some of the areas on the exit exam. The faculty member overseeing the Project Management class will also intensively look at the current questions on the exit exam and ensure they still align with the topics being covered in the Project Management classes.

Faculty members will also begin the process of dividing course material among three classes for the student cohorts entering in 2026-2027 and beyond. Faculty will work on setting up the classes to ensure more thorough coverage of statistical techniques. Additionally, faculty will work to ensure more thorough coverage of the proper formulation of quantitative and qualitative research questions.

The faculty member teaching CIS 5900 will also continue to refine the resources available in that class to ensure coverage of appropriate statistical knowledge and increase research proficiency.