Tarleton State University

Detailed Assessment Report
2016-2017 Information Systems, M.S.

As of: 8/29/2017 11:25 AM CST

(Includes those Action Plans with Budget Amounts marked *One-Time, Recurring, No Request*.)

Mission / Purpose

The mission of the Master of Science in Information Systems (MSIS) degree program is to provide a relevant, high-quality education that develops students' decision making skills in the productive and profitable utilization of computer information systems, preparing them for success in their careers and life-long learning.

Goals

G 1: Critical Thinking

To prepare students to think critically about the concepts and practices of Computer Information Systems

Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Students will design scalable, robust, network solutions based on business/organizational needs

Students will demonstrate their network design knowledge and skills through case analyses and comprehensive examinations. STRATEGY: Students will be introduced to related knowledge through undergraduate programs and/or BCIS 5301, BCIS 5302, BCIS 5303, and BCIS 5315. Students will develop related knowledge in BCIS 5311. Students will master related knowledge in BCIS 5304.

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Relevant Associations:

General Education/Core Curriculum Associations

3.1.4 Apply critical thinking in solving problems

Strategic Plan Associations

College of Business Administration

1 Achieve a high level of student learning and critical thinking

Related Measures

M 1: Comprehensive exam

Students will demonstrate knowledge of the information systems discipline and will complete a case analysis on the comprehensive exam. At least two reviewers will score submissions for each student using the departmental rubric. The rubric is on a two-point forced-choice scale indicating whether or not students complete each section of the exam successfully. The exam coordinator will be responsible for rubric collection and submission to the department head who will analyze and report results, according to the sustainability matrix.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Target:
80% of students will complete the case analysis associated with network design successfully.

Connected Documents
Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Finding (2016-2017) - Target: Not Met
For the Fall, Spring, and Summer semesters of 2016-2017 academic year, 71% (10 of 14) of students passed the networking portion of comprehensive exams. The following represents the individual items assessed:

Student is able to analyze business case to develop appropriate network solution: 92.86%.
Student is able to develop appropriate logical diagram for business case given: 57.14%.
Student is able to develop appropriate physical diagram for business case given: 42.86%.
Student is able to develop appropriate financial analysis of network investment: 50.00%.
Student addresses appropriate security measures necessary if network development: 42.86%.
Student develops appropriate management policies and procedures for network design: 71.43%.
Student is able to professionally articulate and communicate their ideas: 85.71%.

Related Action Plans (by Established cycle, then alpha):

Telecommunications for Managers (5304) Action Plan
This action plan is to address short comings in the area of telecommunications (BCIS 5304; Taught by Dr. Joseph H. Schuessler; Course Rotation: Fall, Summer).

Summer 2017: 4 out of 4 passed the networking section of the comprehensive exam. The course that teaches the major components of this objective continues to be refined. Nevertheless, results seem to be generally static and lack the kind of improvement wanted. As a result, a discussion among faculty led to the suggestion that the group networking project in the class be deconstructed to include individual components/contributions so that we can better insure that each person is actively involved in each aspect of the projects. Then, within each group, those components can be shared among the group to determine the most appropriate solution for the group. Additionally, based on the results, faculty agreed to obtain permission from a student who successfully completed comps with a quality submission with the purpose of purposefully generating errors throughout so students could see an example of the "same" submission both with and without errors to help illustrate what we are looking for. Permission has already been obtained and over the course of the summer, faculty will mark up their respective sections accordingly.

Spring 2017: 5 out of 8 passed the networking section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 1 out of 2 passed the networking section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 0 out of 2 passed the networking section of the comprehensive exam. Despite this, on the whole we found that students improved in most areas including physical designs, financial analyses, risk assessment, and developing appropriate management policies/procedures. Additionally, students flattened out the downward trend on being able to articulate and communicate their ideas. Areas for concern included improving their logical diagrams as well as improving the ability to conduct financial analyses. The latter was selected because even though students are improving, it was still one of their lowest scoring items. In order to improve their logical diagrams, Dr. Schuessler is going to implement a more detailed rubric to act as a guide for students to understand the individual components that make up a good logical diagram. He has found success with this in his undergraduate networking class. This will require some restructuring of the graduate assignments but it should be a relatively easy solution. Regarding improving their financial analyses of their networking project in the class, Dr. Schuessler utilizes a blog in which he has written an article outlining an approach to conduct the analysis. However, during presentations, it became apparent that even though the blog had been assigned to students, there was still some confusion. As a result, Dr. Schuessler has indicated that he will put together a short 7-10 minute video to help explain that rationale in a format that may be more conducive to student learning.

Spring 2016: 4 out of 4 successfully passed the networking section of the comprehensive exam. We witnessed continued improvement in all areas with the exception of logical diagramming which will be addressed when the academic year's data is complete and can be analyzed.

Fall 2015: 5 out of 7 successfully passed the networking section of the comprehensive exam. We are continuing to see improvement in the areas where students have been historically weak. Their scores on diagramming (logical and physical) are both inline with their scores in other sections of the exam. The same can be said for their development of management policies. They also are improving in their financial analyses but there is still room for improvement in this area.

Summer 2015: We are still in a wait and see mode. Changes made as a result of comprehensive exam results are still filtering through the system. The short term results seem promising as the four most recent students to take the networking portion of the exam all passed and did quite well on most dimensions measured. The weakest areas continue to be in the area of physical design, financial analyses, and managerial issues related to networking where 2 out of 4 students met or exceeded in each of those areas. But, improvement in the area of logical design and the overall success on this section of the exam is promising. Discussion Board topics have continued to be refined to not only encourage the logistical participation of students throughout the week by requiring multiple posts which must be spread out over the course of the week, but also targeted to coincide with the semester projects, focusing on each of the major dimensions being assessed. As a result, it is garnering a rather large amount of discussion regarding the expectations and resulting in improved

semester projects. As this modification filters through the system, it is hoped that we will continue to see improved results on the comprehensive exam. Assuming we have another successful cycle, it may be recommended to expand the current rubric to account for wireless designs as well.

Spring 2015: Students continue to struggle in the area of developing physical diagrams with only 2 out of 7 students meeting or exceeding this topic during the Spring 2015 comprehensive exams. Students also struggled in the area of taking a methodical approach to addressing the security related issues to a network proposal with only 1 out of 7 meeting or exceeding in this area. Finally, students struggled with developing appropriate management approaches to dealing with an information system with only 2 out of 7 students meeting or exceeding expectations. The plan at this point has largely been to "wait and see" as the changes implemented in BCIS 5304 (Telecommunications for Managers) have time to take effect on students taking the comprehensive exams. Dr. Schuessler further refined the rubric criteria in class for diagram to emphasize not just logical and physical diagrams, but also wireless diagrams. Additionally, Dr. Schuessler also further refined his use of Discussion Boards to drive student engagement on the different items being assessed in the rubric by having students participate throughout the week rather than simply being allowed to make all of their posts at one time.

Fall 2014: Students struggled in the area of developing physical diagrams with only 2 out of 7 students meeting or exceeding in this area as well as in the area of developing financial analyses where only 2 out of 7 met or exceeded expectations during the Fall 2015 comprehensive exams. To address these short comings, Dr. Schuessler added additional content to the class to cover the financial analyses of technological projects. Additionally, he emphasized the development of both logical and physical diagrams by adjusting his grading criteria to assess each type of diagram separately in semester projects. Lastly, Dr. Schuessler adjusted his Discussion Board topics to align topics with the different items being assessed on the comprehensive exam rubric as well as having students share rough drafts of their projects throughout the semester. The goal was to have students be able to see the work being produced by their peers and to receive lots of feedback from their peers regarding their own work.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):

Measure: Comprehensive exam | **Outcome/Objective:** Students will design scalable, robust, network solutions based on business/organizational needs

Responsible Person/Group: Dr. Schuessler
Connected Document

Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

SLO 2: Student will identify appropriate information technologies to support the strategic and operational goals of an organization.

Student will identify appropriate information technologies to support the strategic and operational goals of an organization. STRATEGY: Students will be introduced to related knowledge through undergraduate programs and/or BCIS 5301, BCIS 5302, BCIS 5303, and BCIS 5315. Students will develop related knowledge in BCIS 5304, BCIS 5307, and BCIS 5315 Students will master related knowledge in BCIS 5311.

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Relevant Associations:

General Education/Core Curriculum Associations

3.1.4 Apply critical thinking in solving problems

Strategic Plan Associations

College of Business Administration

1 Achieve a high level of student learning and critical thinking

Related Measures

M 1: Comprehensive exam

Students will demonstrate knowledge of the information systems discipline and will complete a case analysis on the comprehensive exam. At least two reviewers will score submissions for each student using the departmental rubric. The rubric is on a two-point forced-choice scale indicating whether or not students complete each section of the exam successfully. The exam coordinator will be responsible for rubric collection and submission to the department head who will analyze and report results, according to the sustainability matrix.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Target:

80% of students will complete the case analysis associated with the strategic and operational application of information systems within organization successfully.

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Finding (2016-2017) - Target: Not Met

For the Fall, Spring, and Summer semesters of 2016-2017 academic year, 79% (11 of 14) of students passed the MIS portion of comprehensive exams. The following represents the individual items assessed:

Student is able to analyze business case to identify key management issues related to information systems: 71.43%.
Student is able to analyze business case to identify key organizational issues related to information systems: 71.43%.
Student is able to analyze business case to identify key technology issues related to information systems: 71.43%.
Student is able to recommend the best course of action to address the issues identified in the business case: 71.43%.
Student is able to support a recommendation with appropriate rationale and references to “credible” electronic resources: 14.29%.
Student is able to professionally articulate and communicate their ideas: 28.57%.

Related Action Plans (by Established cycle, then alpha):

Managing Information Systems (5311) Action Plan

This action plan is to address short comings in the area of managing information systems (BCIS 5311; Taught by Dr. Kevin Fulk, Dr. Leah Schultz, and Dr. Dennis Jones; Course Rotation: Fall, Spring, Summer).

Summer 2017: 2 of 2 students passed the managing information systems

section of the comprehensive exam. Based on the results, faculty agreed to obtain permission from a student who successfully completed comps with a quality submission with the purpose of purposefully generating errors throughout so students could see an example of the "same" submission both with and without errors to help illustrate what we are looking for. Permission has already been obtained and over the course of the summer, faculty will mark up their respective sections accordingly.

Spring 2017: 7 out of 8 students passed the managing information systems section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 2 out of 4 students passed the managing information systems section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 1 out of 4 students taking the managing information systems section of the comprehensive exam passed this cycle. This completes out the data collection cycle for this academic year. Two areas to be targeted include the student being able to support a recommendation with appropriate rationale and references to "credible" electronic resources and for students to be able to professionally articulate and communicate their ideas. To address the former, additional language will be added to the instructions on the comprehensive exam to indicate the length, use of inline citations, and minimum number of electronic resources. Regarding the latter, it was noted that this same item is scored significantly different on the other three sections of the exam, suggesting an inter-rater reliability issue. As a result, faculty have agreed to meet prior to scoring future exams in order to develop a more consistent set of expectations as it relates to the student's ability to professionally articulate and communicate their ideas.

Spring 2016: 4 out of 4 students taking this section passed this cycle. This is again, a partial data collection for this cycle but everything from the previous semester is trending upward. Additionally, everything year by year is trending up with the exception of students being able to professionally articulate and communicate their ideas.

Fall 2015: This is a partial data collection. Conclusions drawn from results should be made with care until all data has been collected and reported for this cycle. 6 out of 10 successfully passed the Managing Information Systems section of the comprehensive exam. We have seen significant improvement in the area of students being able to identify key management issues, organizational issues, technology issues, as well as being able to recommend the best course of action. We are continuing to monitor student performance in each area.

Summer 2015: As a result of the data collected for the 2015-2015 academic year, 5311 instructors met, discussed, and agreed to include the following three components in all future sections of 5311 to address the deficient areas discussed below:

1. Students will work in groups to complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination.
2. Faculty will provide feedback on the group case analysis prior to the students being required to complete the individual case analysis.
3. As part of the final examination for the course, each student will complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination.

The faculty member teaching the summer sections of 5311, reported that these three components were successfully implemented. Moving forward, we will continue to incorporate these components in all future sections of 5311. Until we have student who completed 5311 after Spring 2015 attempt the comprehensive exam, it will not be possible to assess the impact of these changes. Therefore, beginning in Fall 2015, it will be important to track the semester when students completed 5311 so that the results of post Spring 2015 students can be analyzed separately from students who completed 5311 prior to Summer 2015.

Spring 2015: The lowest area (37.5% meet or exceed) was: Student is able to analyze business case to identify key management issues related to information systems. As noted in a review of the Fall 2014 assessment: Many students enter the MS-IS program with a very limited business background. Therefore, they often have a “blind spot” related to the “soft side” of IS. Additionally, this is the area where the majority of the MBA students in BCIS 5311 are the most comfortable; thus, these topics tend to generate less course dialog. Given that this course is required for both MBA and MS-IS students, the faculty teaching 5311 have a challenge to balance the needs of these two groups. Faculty teaching in this subject area met to discuss options and agreed to implement the following in their respective sections: Students will work in groups to complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination. Faculty will provide feedback on the group case analysis prior to the students being required to complete the individual case analysis. Near the end of the course, each student will complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination. It is believed that providing students exposure to cases that focus on same areas as the MIS section of the comprehensive examination, will better prepare them for this examination.

Fall 2014: The lowest area (40.0% meet or exceed) was: Student is able to analyze business case to identify key management issues related to information systems. Many students enter the MS-IS program with a very limited business background. Therefore, they often have a “blind spot” related to the “soft side” of IS. Additionally, this is the area where the majority of the MBA students in BCIS 5311 are the most comfortable; thus, these topics tend to generate less course dialog. Given that this course is required for both MBA and MS-IS students, the faculty teaching 5311 have a challenge to balance the needs of these two groups. To address this concern, the graduate faculty developed a two prong approach:
1. The graduate faculty agreed to incorporate a comprehensive exam type case and corresponding questions into the 5311 course. The addition of this type of case and questions will reinforce for the MS-IS students the need to analyze cases from a management perspective, as well as organizational and technology perspectives.
2. The second strategy to address this issue was to recommend adding the 1.5 MGMT leveling course as a prerequisite to BCIS 5311. This will provide the MS-IS students with a more solid foundation to the “management”

components of MIS without over emphasizing management issues in the course that could be redundant for the MBA students.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Comprehensive exam | **Outcome/Objective:** Student will identify appropriate information technologies to support the strategic and operational goals of an organization.

Responsible Person/Group: Dr. Jones, Dr. Nagy, Dr. Fulk, and Dr. Schultz
Connected Document
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

SLO 3: Students will design scalable, robust, database solutions based on business/organizational needs

Students will design scalable, robust, database solutions based on business/organizational needs

Connected Documents
Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Relevant Associations:

General Education/Core Curriculum Associations

3.1.4 Apply critical thinking in solving problems

Strategic Plan Associations

College of Business Administration
1 Achieve a high level of student learning and critical thinking

Related Measures

M 1: Comprehensive exam

Students will demonstrate knowledge of the information systems discipline and will complete a case analysis on the comprehensive exam. At least two reviewers will score submissions for each student using the departmental rubric. The rubric is on a two-point forced-choice scale indicating whether or not students complete each section of the exam successfully. The exam coordinator will be responsible for rubric collection and submission to the department head who will analyze and report results, according to the sustainability matrix.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Connected Documents
Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Target:
80% of students will complete the case analysis associated with databases successfully.

Connected Documents
Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Finding (2016-2017) - Target: Met
For the Fall, Spring, and Summer semesters of 2016-2017 academic year, 92% (11 of 12) of students passed the database portion of comprehensive exams. The following represents the individual items assessed:

Student is able to analyze business case to identify requirements to develop appropriate database solution: 90.00%.
Student is able to create appropriate logical database models for business case given: 50.00%.
Student is able to create appropriate physical database models for business case given: 60.00%.
Student is able to discuss appropriate management policies and procedures for database design: 70.00%.
Student is able to professionally articulate and communicate their ideas: 100%.

Related Action Plans (by Established cycle, then alpha):

Database (5316) Action Plan

This action plan is to address short comings in the area of database knowledge (BCIS 5316; Taught by Dr. Del Nagy; Course Rotation: Fall).

Summer 2017: 1 of 1 students passed the database section of the comprehensive exam. Based on the results, faculty agreed to obtain permission from a student who successfully completed comps with a quality submission with the purpose of purposefully generating errors throughout so students could see an example of the "same" submission both with and without errors to help illustrate what we are looking for. Permission has already been obtained and over the course of the summer, faculty will mark up their respective sections accordingly.

Spring 2017: 5 out of 5 students passed the database section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 4 out of 4 students passed the database section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 2 out of 3 successfully passed the Database Systems section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest areas were in logical and physical database models. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the graduate office, graduate CIS faculty will meet to discuss the results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Spring 2016: 5 out of 5 successfully passed the Database Systems section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest areas were in logical and physical database models. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the graduate office, graduate CIS faculty will meet to discuss the

results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Fall 2015: 5 out of 10 successfully passed the Database Systems section of the comprehensive exam. We are starting to see some improvement in the ability of students to develop appropriate diagrams. Specifically, their development of physical database models is strong. However, logical database models still needs to improve. This is only the first round of data collection for this academic year so we are again, in wait and see mode to see if changes/enhancements described below are having and effect.

Summer 2015: Content described during the Spring cycle is currently being developed and implemented in the Database course (5316) to address student shortcomings in their ability to interpret, design, and develop appropriate process models and diagrams. This course is only taught each Fall and the areas of deficiency are similar to those in the Systems Analysis and Design course (5307) in which these same course enhancements will also be implemented.

Spring 2015: Students are struggling with diagramming different aspects of information systems and translating these logical requirements into physical options. So with that in mind CIS faculty agree to create a series of videos highlighting different diagramming frameworks, specifically use case diagrams, activity diagrams, and class diagrams so that we can address the user interface, business process, and database needs. Additionally, two assignments will be added that will lead into one another.

- The first assignment will address reading and interpreting existing diagrams - elementary things like what the symbols mean to how these symbols would translate into IS components.
- The second assignment will be to create these diagrams from a case and then translate those requirements into a physical model for the candidate system.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Comprehensive exam | **Outcome/Objective:** Students will design scalable, robust, database solutions based on business/organizational needs

Responsible Person/Group: Dr. Del Nagy
Connected Document
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

SLO 4: Students will apply systems development methodologies that allow them to analyze and develop appropriate solutions to busin

Students will apply the Systems Development Life Cycle to identify project methodologies that align with a case context, analyze a potential information system at a user interface, business process, and database levels, and be able to propose different design alternatives in a design matrix.

Connected Documents
Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Relevant Associations:

General Education/Core Curriculum Associations

3.1.4 Apply critical thinking in solving problems

Strategic Plan Associations

College of Business Administration

1 Achieve a high level of student learning and critical thinking

Related Measures

M 1: Comprehensive exam

Students will demonstrate knowledge of the information systems discipline and will complete a case analysis on the comprehensive exam. At least two reviewers will score submissions for each student using the departmental rubric. The rubric is on a two-point forced-choice scale indicating whether or not students complete each section of the exam successfully. The exam coordinator will be responsible for rubric collection and submission to the department head who will analyze and report results, according to the sustainability matrix.

Source of Evidence: Comprehensive/end-of-program subject matter exam

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Target:

80% of students will complete the case analysis associated with systems analysis and design successfully.

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Finding (2016-2017) - Target: Not Met

For the Fall, Spring, and Summer semesters of 2016-2017 academic year, 75% (9 of 12) of students passed the Systems Analysis and Design portion of comprehensive exams. The following represents the individual items assessed:

Student is able to analyze business cases to identify functional requirements to develop an appropriate solution: 75%.
Student is able to identify and discuss the issues related to project scope: 66.67.
Student is able to create appropriate process models for the business case: 58.33%.
Student is able to identify business case roles: 100%.
Student is able to create appropriate diagrams for the business case: 58.33%.
Student is able to identify, describe, and suggest systems development methodologies based upon a business case: 83.33%.
Student is able to identify component steps in a systems development methodology and integrate contextual drivers for specific segments (for example security, implementation processes, or systems sourcing): 83.33%.
Student is able to professionally articulate and communicate their ideas: 91.67%.

Related Action Plans (by Established cycle, then alpha):

Systems Analysis and Design (5307) Action Plan

This action plan is to address short comings in the area of systems analysis and design (BCIS 5307; Taught by Dr. Jason Sharp; Course Rotation: Spring).

Summer 2017: 2 out of 3 passed the systems analysis and design section of the comprehensive exam. After examining student performance on various items on the exam, faculty agreed to increase the number of

diagramming activities including using multiple choice quizzes to assess student knowledge on good and bad diagramming practices. Additionally, adding additional assignments where students modify existing diagrams to meet business rules, create diagrams to meet business rules, as well as staging assignments so that students first produce an initial diagram, receive feedback, revise and resubmit based on that feedback.

Spring 2017: 3 out of 5 passed the systems analysis and design section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 4 out of 4 passed the systems analysis and design section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 2 out of 3 successfully passed the Systems Analysis and Design section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest area was in their ability to identify, describe, and suggest systems development methodologies based upon a business case. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the graduate office, graduate CIS faculty will meet to discuss the results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Spring 2016: 2 out of 2 successfully passed the Systems Analysis and Design section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest area was in their ability to identify component steps in a systems development methodology and integrate contextual drivers for specific segments. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the graduate office, graduate CIS faculty will meet to discuss the results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Fall 2015: This is a partial data collection. Conclusions drawn from results should be made with care until all data has been collected and reported for this cycle. 6 out of 9 successfully passed the Systems Analysis and Design section of the comprehensive exam. We are continuing to see improvement, particularly in the areas of creating process models and creating diagrams for business cases where students have historically scored the lowest. We will continue to monitor this as the rest of the data for this academic year is collected.

Summer 2015: There is nothing additional to report this semester. The action plan to improve student ability to interpret, design, and develop process models and diagramming is closely related to the same issues

identified in the Database course (5316) which is taught each Fall. As a result, this content is currently being developed and implemented in that class where the items for this objective are developed and mastered.

Spring 2015: Students are struggling with diagramming different aspects of information systems and translating these logical requirements into physical options. So with that in mind CIS faculty agreed to create a series of videos highlighting different diagramming frameworks, specifically use case diagrams, activity diagrams, and class diagrams so that we can address the user interface, business process, and database needs. Additionally, two assignments will be added that will lead into one another.

- The first assignment will address reading and interpreting existing diagrams - elementary things like what the symbols mean to how these symbols would translate into IS components.
- The second assignment will be to create these diagrams from a case and then translate those requirements into a physical model for the candidate system.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Comprehensive exam | **Outcome/Objective:** Students will apply systems development methodologies that allow them to analyze and develop appropriate solutions to busin

Responsible Person/Group: Dr. Jason Sharp
Connected Document
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

SLO 5: Students will interpret and apply discipline related academic/practitioner literature.

The Master of Science degree in Information Systems prepares online students to interpret and apply discipline related academic/practitioner literature through literature reviews. STRATEGY: Students will be introduced to related knowledge through undergraduate programs and/or graduate entrance exams. Students will develop related knowledge in BCIS 5304, BCIS 5307, BCIS 5311, and BCIS 5316. Students will master related knowledge in BCIS 5392.

Connected Documents
Course Map/Sustainability Matrix 2014-2015 (Rev1)
Literature Review Rubric

Relevant Associations:

General Education/Core Curriculum Associations

3.1.4 Apply critical thinking in solving problems
3.1.5 Demonstrate the capacity for growth and scholarship

Strategic Plan Associations

College of Business Administration
1 Achieve a high level of student learning and critical thinking
3 Engage in scholary/creative activities to broaden knowledge/understanding in business disciplines

Related Measures

M 2: Literature Review

Students will conduct a literature review of relevant information systems topics.

Source of Evidence: Written assignment(s), usually scored by a rubric

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Literature Review Rubric

Target:
80% of students will complete the literature review successfully.

Connected Documents

Course Map/Sustainability Matrix 2014-2015 (Rev1)
Literature Review Rubric

Finding (2016-2017) - Target: Not Met
For the Fall, Spring and Summer semesters of 2016-2017 academic year, 71% (10 of 14) of students passed the Literature Review objectives. The following represents the individual items assessed:

Student produces a tentative bibliography of high-quality, credible, relevant sources that are appropriate for the research topic: 71%.
Student produces a literature map that depicts the relationship among the high-quality, credible, relevant sources: 79%.
Student documents evaluation of sources to demonstrate that they are high-quality, credible, and relevant to the research topic: 93%.
Student produces an annotated bibliography of high-quality, credible, relevant sources that are appropriate for the research topic: 57%.
Student produces a literature review that synthesizes information from high-quality, credible, relevant sources that are appropriate for the research topic: 79%.
Student appropriately applies APA style to the tentative bibliography: 57%.
Student appropriately applies APA style to annotated bibliography: 93%.
Student appropriately applies APA style to the literature review: 93%.

Related Action Plans (by Established cycle, then alpha):

Business Intelligence Systems (BCIS 5392) Action Plan

This action plan was to address short comings in the area of student understanding of discipline related literature (BCIS 5392; Taught by Dr. Dennis Jones; Course Rotation: Spring).

Summer 2017: Course Not Taught This Cycle

Spring 2017: Students are doing relatively well but still not meeting the overall objective of reaching an 80% pass rate. Based on conversations to improve students understanding, it was decided to restructure the rubric for the literature review to move away from assessing students understanding of literature reviews over time (formative as well as summative) to be more consistent with the summative approach used for the other departmental rubrics. Dr. Jones will refine the rubric used in that course for this purpose and share with faculty for feedback.

Fall 2016: This course has not been retaught since the initial pilot test of the newly created rubric (it is taught each Spring). Once it is retaught, we will gain a better understanding of both the effectiveness of the rubric and be able to start identifying areas where students can improve based on trend lines generated.

Summer 2016: This course has not been retaught since the initial pilot test of the newly created rubric (it is taught each Spring). Once it is retaught, we

will gain a better understanding of both the effectiveness of the rubric and be able to start identifying areas where students can improve based on trend lines generated.

Spring 2016: Dr. Dennis Jones pilot tested the newly developed rubric. Though the objective was not met, the results from the first run through were somewhat promising. Students need to improve in the areas of producing a literature map, an annotated bibliography, and a literature review. In order to improve in these areas, students will be provided with more examples. Also, assignment requirements will be reviewed to clarify/expand the sections related to these specific requirements

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Fall 2015: Dr. Dennis Jones developed a rubric to assess literature reviews of students.The rubric will be scored similarly to other rubrics used throughout the College of Business on a 0, 1, 2 basis representing Meets Expectations: No; Meets Expectations: Yes, and Meets Expectations: Exceeds basis. There are three dimensions with each dimension including 2 or 3 items.

Summer 2015: Dr. Dennis Jones mentioned that he already has students perform a literature review in his BCIS 5392 class. He stated that he could develop a rubric to assess the reviews. He will develop a rubric and share with the rest of the faculty for refinement.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Literature Review | **Outcome/Objective:** Students will interpret and apply discipline related academic/practitioner literature.

Responsible Person/Group: Dr. Dennis Jones
Connected Document
Literature Review Rubric

SLO 6: Students will understand how to identify, develop, and execute business related research to address business problems.

The Master of Science degree in Information Systems prepares online students to identify, develop, and execute business related research to address business problems. STRATEGY: Students will be introduced to related knowledge through undergraduate programs and/or graduate entrance exams. Students will develop related knowledge in BCIS 5392. Students will master related knowledge in BUSI 5398.

Connected Document
Course Map/Sustainability Matrix 2014-2015 (Rev1)

Relevant Associations:

General Education/Core Curriculum Associations

3.1.5 Demonstrate the capacity for growth and scholarship
3.1.7 Conduct research and scholarly activity

Strategic Plan Associations

College of Business Administration
3 Engage in scholary/creative activities to broaden knowledge/understanding in business disciplines

Related Measures

M 3: Research Project

Research Project

Source of Evidence: Project, either individual or group

Connected Document

Course Map/Sustainability Matrix 2014-2015 (Rev1)

Target:

80% of students will complete the research project successfully.

Connected Document

Course Map/Sustainability Matrix 2014-2015 (Rev1)

Finding (2016-2017) - Target: Not Met

Data not gathered this cycle. Data for this objective is to be gathered using BUSI 5398. The development of the rubric for BUSI 5398 has not been developed at this point and is awaiting development through the college's AoL process.

Related Action Plans (by Established cycle, then alpha):

Business Research Methods (BUSI 5398) Action Plan

This action plan is to address short comings in the area of professional development/research (BUSI 5398; Taught by Dr. Tom Bradley, Dr. Walt Kendall, Dr. Drake Mullens, Dr. Michel Zuch; Course Rotation: Fall, Spring, Summer).

Summer 2017: This is still a work in progress. Due to efforts to bring other programs up to speed (B.A.A.S. in Information Technology and B.S. in Computer Information Systems), this effort has been put on the back burner.

Spring 2017: One of our tasks for our final AoL meeting of the spring is to address this issue. I have agreed to identify/develop a "straw-man" rubric with which to begin the discussion to develop our own college wide rubric for assessment purposes.

Fall 2016: Dr. Bradley shared some of his rubrics that he currently uses in his course but to date, they do not seem ideal for assessing research for assessment purposes.

Summer 2016: Dr. Bradley continues to develop the topics course and it has been being subbed for BUSI 5398 but we have been unable to implement an appropriate rubric at this point. This is currently being brought to the attention of the AoL Committee to develop such a rubric/coopt a rubric currently in use in that class in order to assess research methods.

Spring 2016: Dr. Tom Bradley is pilot testing a topics research course as an "Evidence Based Decision Making" course, designed to replace BUSI 5398. The premise of the course is to walk students through critical thinking, identifying credible resources, identifying research questions, and preparing a discipline specific research project up to the point of data collection. With the course in place, Dr. Bradley has stated that this would be an appropriate place to assess the professional development/research required objective to be developed at a later time. At this point, the timeline is for this development course to cycle into the BUSI 5398 course at which time, we should be prepared to pilot test a professional development/research rubric.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Research Project | **Outcome/Objective:** Students will understand how to identify, develop, and execute business related research to address business problems.

Details of Action Plans for This Cycle (by Established cycle, then alpha)

Business Intelligence Systems (BCIS 5392) Action Plan

This action plan was to address short comings in the area of student understanding of discipline related literature (BCIS 5392; Taught by Dr. Dennis Jones; Course Rotation: Spring).

Summer 2017: Course Not Taught This Cycle

Spring 2017: Students are doing relatively well but still not meeting the overall objective of reaching an 80% pass rate. Based on conversations to improve students understanding, it was decided to restructure the rubric for the literature review to move away from assessing students understanding of literature reviews over time (formative as well as summative) to be more consistent with the summative approach used for the other departmental rubrics. Dr. Jones will refine the rubric used in that course for this purpose and share with faculty for feedback.

Fall 2016: This course has not been retaught since the initial pilot test of the newly created rubric (it is taught each Spring). Once it is retaught, we will gain a better understanding of both the effectiveness of the rubric and be able to start identifying areas where students can improve based on trend lines generated.

Summer 2016: This course has not been retaught since the initial pilot test of the newly created rubric (it is taught each Spring). Once it is retaught, we will gain a better understanding of both the effectiveness of the rubric and be able to start identifying areas where students can improve based on trend lines generated.

Spring 2016: Dr. Dennis Jones pilot tested the newly developed rubric. Though the objective was not met, the results from the first run through were somewhat promising. Students need to improve in the areas of producing a literature map, an annotated bibliography, and a literature review. In order to improve in these areas, students will be provided with more examples. Also, assignment requirements will be reviewed to clarify/expand the sections related to these specific requirements

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Fall 2015: Dr. Dennis Jones developed a rubric to assess literature reviews of students.The rubric will be scored similarly to other rubrics used throughout the College of Business on a 0, 1, 2 basis representing Meets Expectations: No; Meets Expectations: Yes, and Meets Expectations: Exceeds basis. There are three dimensions with each dimension including 2 or 3 items.

Summer 2015: Dr. Dennis Jones mentioned that he already has students perform a literature review in his BCIS 5392 class. He stated that he could develop a rubric to assess the reviews. He will develop a rubric and share with the rest of the faculty for refinement.

Established in Cycle: 2014-2015

Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Literature Review | **Outcome/Objective:** Students will interpret and apply discipline related academic/practitioner literature.

Responsible Person/Group: Dr. Dennis Jones
Connected Document
Literature Review Rubric

Business Research Methods (BUSI 5398) Action Plan

This action plan is to address short comings in the area of professional development/research (BUSI 5398; Taught by Dr. Tom Bradley, Dr. Walt Kendall, Dr. Drake Mullens, Dr. Michel Zuch; Course Rotation: Fall, Spring, Summer).

Summer 2017: This is still a work in progress. Due to efforts to bring other programs up to speed (B.A.A.S. in Information Technology and B.S. in Computer Information Systems), this effort has been put on the back burner.

Spring 2017: One of our tasks for our final AoL meeting of the spring is to address this issue. I have agreed to identify/develop a "straw-man" rubric with which to begin the discussion to develop our own college wide rubric for assessment purposes.

Fall 2016: Dr. Bradley shared some of his rubrics that he currently uses in his course but to date, they do not seem ideal for assessing research for assessment purposes.

Summer 2016: Dr. Bradley continues to develop the topics course and it has been being subbed for BUSI 5398 but we have been unable to implement an appropriate rubric at this point. This is currently being brought to the attention of the AoL Committee to develop such a rubric/coopt a rubric currently in use in that class in order to assess research methods.

Spring 2016: Dr. Tom Bradley is pilot testing a topics research course as an "Evidence Based Decision Making" course, designed to replace BUSI 5398. The premise of the course is to walk students through critical thinking, identifying credible resources, identifying research questions, and preparing a discipline specific research project up to the point of data collection. With the course in place, Dr. Bradley has stated that this would be an appropriate place to assess the professional development/research required objective to be developed at a later time. At this point, the timeline is for this development course to cycle into the BUSI 5398 course at which time, we should be prepared to pilot test a professional development/research rubric.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Research Project | **Outcome/Objective:** Students will understand how to identify, develop, and execute business related research to address business problems.

Database (5316) Action Plan

This action plan is to address short comings in the area of database knowledge (BCIS 5316; Taught by Dr. Del Nagy; Course Rotation: Fall).

Summer 2017: 1 of 1 students passed the database section of the comprehensive exam.

Based on the results, faculty agreed to obtain permission from a student who successfully completed comps with a quality submission with the purpose of purposefully generating errors throughout so students could see an example of the "same" submission both with and without errors to help illustrate what we are looking for. Permission has already been obtained and over the course of the summer, faculty will mark up their respective sections accordingly.

Spring 2017: 5 out of 5 students passed the database section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 4 out of 4 students passed the database section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 2 out of 3 successfully passed the Database Systems section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest areas were in logical and physical database models. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the graduate office, graduate CIS faculty will meet to discuss the results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Spring 2016: 5 out of 5 successfully passed the Database Systems section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest areas were in logical and physical database models. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the graduate office, graduate CIS faculty will meet to discuss the results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Fall 2015: 5 out of 10 successfully passed the Database Systems section of the comprehensive exam. We are starting to see some improvement in the ability of students to develop appropriate diagrams. Specifically, their development of physical database models is strong. However, logical database models still needs to improve. This is only the first round of data collection for this academic year so we are again, in wait and see mode to see if changes/enhancements described below are having and effect.

Summer 2015: Content described during the Spring cycle is currently being developed and implemented in the Database course (5316) to address student shortcomings in their ability to interpret, design, and develop appropriate process models and diagrams. This course is only taught each Fall and the areas of deficiency are similar to those in the Systems Analysis and Design course (5307) in which these same course enhancements will also be implemented.

Spring 2015: Students are struggling with diagramming different aspects of information systems and translating these logical requirements into physical options. So with that in mind CIS faculty agree to create a series of videos highlighting different diagramming frameworks, specifically use case diagrams, activity diagrams, and class diagrams so that

we can address the user interface, business process, and database needs. Additionally, two assignments will be added that will lead into one another.

- The first assignment will address reading and interpreting existing diagrams - elementary things like what the symbols mean to how these symbols would translate into IS components.
- The second assignment will be to create these diagrams from a case and then translate those requirements into a physical model for the candidate system.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Comprehensive exam | **Outcome/Objective:** Students will design scalable, robust, database solutions based on business/organizational needs

Responsible Person/Group: Dr. Del Nagy
Connected Document
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Managing Information Systems (5311) Action Plan

This action plan is to address short comings in the area of managing information systems (BCIS 5311; Taught by Dr. Kevin Fulk, Dr. Leah Schultz, and Dr. Dennis Jones; Course Rotation: Fall, Spring, Summer).

Summer 2017: 2 of 2 students passed the managing information systems section of the comprehensive exam. Based on the results, faculty agreed to obtain permission from a student who successfully completed comps with a quality submission with the purpose of purposefully generating errors throughout so students could see an example of the "same" submission both with and without errors to help illustrate what we are looking for. Permission has already been obtained and over the course of the summer, faculty will mark up their respective sections accordingly.

Spring 2017: 7 out of 8 students passed the managing information systems section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 2 out of 4 students passed the managing information systems section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 1 out of 4 students taking the managing information systems section of the comprehensive exam passed this cycle. This completes out the data collection cycle for this academic year. Two areas to be targeted include the student being able to support a recommendation with appropriate rationale and references to "credible" electronic resources and for students to be able to professionally articulate and communicate their ideas. To address the former, additional language will be added to the instructions on the comprehensive exam to indicate the length, use of inline citations, and minimum number of electronic resources. Regarding the latter, it was noted that this same item is scored significantly different on the other three sections of the exam, suggesting an inter-rater reliability issue. As a result, faculty have agreed to meet prior to scoring future exams in order to develop a more consistent set of expectations as it relates to the student's ability to professionally articulate and communicate their ideas.

Spring 2016: 4 out of 4 students taking this section passed this cycle. This is again, a partial data collection for this cycle but everything from the previous semester is trending upward. Additionally, everything year by year is trending up with the exception of students being able to professionally articulate and communicate their ideas.

Fall 2015: This is a partial data collection. Conclusions drawn from results should be made with care until all data has been collected and reported for this cycle. 6 out of 10 successfully passed the Managing Information Systems section of the comprehensive exam. We have seen significant improvement in the area of students being able to identify key management issues, organizational issues, technology issues, as well as being able to recommend the best course of action. We are continuing to monitor student performance in each area.

Summer 2015: As a result of the data collected for the 2015-2015 academic year, 5311 instructors met, discussed, and agreed to include the following three components in all future sections of 5311 to address the deficient areas discussed below:

1. Students will work in groups to complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination.
2. Faculty will provide feedback on the group case analysis prior to the students being required to complete the individual case analysis.
3. As part of the final examination for the course, each student will complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination.

The faculty member teaching the summer sections of 5311, reported that these three components were successfully implemented. Moving forward, we will continue to incorporate these components in all future sections of 5311. Until we have student who completed 5311 after Spring 2015 attempt the comprehensive exam, it will not be possible to assess the impact of these changes. Therefore, beginning in Fall 2015, it will be important to track the semester when students completed 5311 so that the results of post Spring 2015 students can be analyzed separately from students who completed 5311 prior to Summer 2015.

Spring 2015: The lowest area (37.5% meet or exceed) was: Student is able to analyze business case to identify key management issues related to information systems. As noted in a review of the Fall 2014 assessment: Many students enter the MS-IS program with a very limited business background. Therefore, they often have a “blind spot” related to the “soft side” of IS. Additionally, this is the area where the majority of the MBA students in BCIS 5311 are the most comfortable; thus, these topics tend to generate less course dialog. Given that this course is required for both MBA and MS-IS students, the faculty teaching 5311 have a challenge to balance the needs of these two groups. Faculty teaching in this subject area met to discuss options and agreed to implement the following in their respective sections: Students will work in groups to complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination. Faculty will provide feedback on the group case analysis prior to the students being required to complete the individual case analysis. Near the end of the course, each student will complete a case analysis focusing on the same areas as the MIS section of the comprehensive examination. It is believed that providing students exposure to cases that focus on same areas as the MIS section of the comprehensive examination, will better prepare them for this examination.

Fall 2014: The lowest area (40.0% meet or exceed) was: Student is able to analyze business case to identify key management issues related to information systems. Many students enter the MS-IS program with a very limited business background. Therefore, they often have a “blind spot” related to the “soft side” of IS. Additionally, this is the area

where the majority of the MBA students in BCIS 5311 are the most comfortable; thus, these topics tend to generate less course dialog. Given that this course is required for both MBA and MS-IS students, the faculty teaching 5311 have a challenge to balance the needs of these two groups. To address this concern, the graduate faculty developed a two prong approach:
1. The graduate faculty agreed to incorporate a comprehensive exam type case and corresponding questions into the 5311 course. The addition of this type of case and questions will reinforce for the MS-IS students the need to analyze cases from a management perspective, as well as organizational and technology perspectives.
2. The second strategy to address this issue was to recommend adding the 1.5 MGMT leveling course as a prerequisite to BCIS 5311. This will provide the MS-IS students with a more solid foundation to the “management” components of MIS without over emphasizing management issues in the course that could be redundant for the MBA students.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Comprehensive exam | **Outcome/Objective:** Student will identify appropriate information technologies to support the strategic and operational goals of an organization.

Responsible Person/Group: Dr. Jones, Dr. Nagy, Dr. Fulk, and Dr. Schultz
Connected Document
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Systems Analysis and Design (5307) Action Plan

This action plan is to address short comings in the area of systems analysis and design (BCIS 5307; Taught by Dr. Jason Sharp; Course Rotation: Spring).

Summer 2017: 2 out of 3 passed the systems analysis and design section of the comprehensive exam. After examining student performance on various items on the exam, faculty agreed to increase the number of diagramming activities including using multiple choice quizzes to assess student knowledge on good and bad diagramming practices. Additionally, adding additional assignments where students modify existing diagrams to meet business rules, create diagrams to meet business rules, as well as staging assignments so that students first produce an initial diagram, receive feedback, revise and resubmit based on that feedback.

Spring 2017: 3 out of 5 passed the systems analysis and design section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 4 out of 4 passed the systems analysis and design section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 2 out of 3 successfully passed the Systems Analysis and Design section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest area was in their ability to identify, describe, and suggest systems development methodologies based upon a business case. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the

graduate office, graduate CIS faculty will meet to discuss the results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Spring 2016: 2 out of 2 successfully passed the Systems Analysis and Design section of the comprehensive exam suggesting that, at least as it relates to this section of the exam, that we are having success in improving the quality of our program. Students' weakest area was in their ability to identify component steps in a systems development methodology and integrate contextual drivers for specific segments. A weakness in our assessment process so far has been on the analysis, action plan, and implementation of the plan. As a result, starting spring of 2017, following each submission of comprehensive exam results to the graduate office, graduate CIS faculty will meet to discuss the results, identify areas needing improvement, and a plan to take corrective action in future semesters.

Fall 2015: This is a partial data collection. Conclusions drawn from results should be made with care until all data has been collected and reported for this cycle. 6 out of 9 successfully passed the Systems Analysis and Design section of the comprehensive exam. We are continuing to see improvement, particularly in the areas of creating process models and creating diagrams for business cases where students have historically scored the lowest. We will continue to monitor this as the rest of the data for this academic year is collected.

Summer 2015: There is nothing additional to report this semester. The action plan to improve student ability to interpret, design, and develop process models and diagramming is closely related to the same issues identified in the Database course (5316) which is taught each Fall. As a result, this content is currently being developed and implemented in that class where the items for this objective are developed and mastered.

Spring 2015: Students are struggling with diagramming different aspects of information systems and translating these logical requirements into physical options. So with that in mind CIS faculty agreed to create a series of videos highlighting different diagramming frameworks, specifically use case diagrams, activity diagrams, and class diagrams so that we can address the user interface, business process, and database needs. Additionally, two assignments will be added that will lead into one another.

- The first assignment will address reading and interpreting existing diagrams - elementary things like what the symbols mean to how these symbols would translate into IS components.
- The second assignment will be to create these diagrams from a case and then translate those requirements into a physical model for the candidate system.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Comprehensive exam | **Outcome/Objective:** Students will apply systems development methodologies that allow them to analyze and develop appropriate solutions to busin

Responsible Person/Group: Dr. Jason Sharp
Connected Document
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Telecommunications for Managers (5304) Action Plan

This action plan is to address short comings in the area of telecommunications (BCIS 5304; Taught by Dr. Joseph H. Schuessler; Course Rotation: Fall, Summer).

Summer 2017: 4 out of 4 passed the networking section of the comprehensive exam. The course that teaches the major components of this objective continues to be refined. Nevertheless, results seem to be generally static and lack the kind of improvement wanted. As a result, a discussion among faculty led to the suggestion that the group networking project in the class be deconstructed to include individual components/contributions so that we can better insure that each person is actively involved in each aspect of the projects. Then, within each group, those components can be shared among the group to determine the most appropriate solution for the group. Additionally, based on the results, faculty agreed to obtain permission from a student who successfully completed comps with a quality submission with the purpose of purposefully generating errors throughout so students could see an example of the "same" submission both with and without errors to help illustrate what we are looking for. Permission has already been obtained and over the course of the summer, faculty will mark up their respective sections accordingly.

Spring 2017: 5 out of 8 passed the networking section of the comprehensive exam. This is the second round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Fall 2016: 1 out of 2 passed the networking section of the comprehensive exam. This is the first round of data collection for this academic year so there is too little data to form opinions and/or suggest changes at this point. An analysis of the collective data is planned after the spring data collection.

Summer 2016: 0 out of 2 passed the networking section of the comprehensive exam. Despite this, on the whole we found that students improved in most areas including physical designs, financial analyses, risk assessment, and developing appropriate management policies/procedures. Additionally, students flattened out the downward trend on being able to articulate and communicate their ideas. Areas for concern included improving their logical diagrams as well as improving the ability to conduct financial analyses. The latter was selected because even though students are improving, it was still one of their lowest scoring items. In order to improve their logical diagrams, Dr. Schuessler is going to implement a more detailed rubric to act as a guide for students to understand the individual components that make up a good logical diagram. He has found success with this in his undergraduate networking class. This will require some restructuring of the graduate assignments but it should be a relatively easy solution. Regarding improving their financial analyses of their networking project in the class, Dr. Schuessler utilizes a blog in which he has written an article outlining an approach to conduct the analysis. However, during presentations, it became apparent that even though the blog had been assigned to students, there was still some confusion. As a result, Dr. Schuessler has indicated that he will put together a short 7-10 minute video to help explain that rationale in a format that may be more conducive to student learning.

Spring 2016: 4 out of 4 successfully passed the networking section of the comprehensive exam. We witnessed continued improvement in all areas with the exception of logical diagramming which will be addressed when the academic year's data is complete and can be analyzed.

Fall 2015: 5 out of 7 successfully passed the networking section of the comprehensive exam. We are continuing to see improvement in the areas where students have been historically weak. Their scores on diagramming (logical and physical) are both inline with their scores in other sections of the exam. The same can be said for their development of management policies. They also are improving in their financial analyses but there is still room for improvement in this area.

Summer 2015: We are still in a wait and see mode. Changes made as a result of comprehensive exam results are still filtering through the system. The short term results seem promising as the four most recent students to take the networking portion of the exam all passed and did quite well on most dimensions measured. The weakest areas continue to be in the area of physical design, financial analyses, and managerial issues related to networking where 2 out of 4 students met or exceeded in each of those areas. But, improvement in the area of logical design and the overall success on this section of the exam is promising. Discussion Board topics have continued to be refined to not only encourage the logistical participation of students throughout the week by requiring multiple posts which must be spread out over the course of the week, but also targeted to coincide with the semester projects, focusing on each of the major dimensions being assessed. As a result, it is garnering a rather large amount of discussion regarding the expectations and resulting in improved semester projects. As this modification filters through the system, it is hoped that we will continue to see improved results on the comprehensive exam. Assuming we have another successful cycle, it may be recommended to expand the current rubric to account for wireless designs as well.

Spring 2015: Students continue to struggle in the area of developing physical diagrams with only 2 out of 7 students meeting or exceeding this topic during the Spring 2015 comprehensive exams. Students also struggled in the area of taking a methodical approach to addressing the security related issues to a network proposal with only 1 out of 7 meeting or exceeding in this area. Finally, students struggled with developing appropriate management approaches to dealing with an information system with only 2 out of 7 students meeting or exceeding expectations. The plan at this point has largely been to "wait and see" as the changes implemented in BCIS 5304 (Telecommunications for Managers) have time to take effect on students taking the comprehensive exams. Dr. Schuessler further refined the rubric criteria in class for diagram to emphasize not just logical and physical diagrams, but also wireless diagrams. Additionally, Dr. Schuessler also further refined his use of Discussion Boards to drive student engagement on the different items being assessed in the rubric by having students participate throughout the week rather than simply being allowed to make all of their posts at one time.

Fall 2014: Students struggled in the area of developing physical diagrams with only 2 out of 7 students meeting or exceeding in this area as well as in the area of developing financial analyses where only 2 out of 7 met or exceeded expectations during the Fall 2015 comprehensive exams. To address these short comings, Dr. Schuessler added additional content to the class to cover the financial analyses of technological projects. Additionally, he emphasized the development of both logical and physical diagrams by adjusting his grading criteria to assess each type of diagram separately in semester projects. Lastly, Dr. Schuessler adjusted his Discussion Board topics to align topics with the different items being assessed on the comprehensive exam rubric as well as having students share rough drafts of their projects throughout the semester. The goal was to have students be able to see the work being produced by their peers and to receive lots of feedback from their peers regarding their own work.

Established in Cycle: 2014-2015
Implementation Status: In-Progress
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Comprehensive exam | **Outcome/Objective:** Students will design scalable, robust, network solutions based on business/organizational needs

Responsible Person/Group: Dr. Schuessler
Connected Document
Rubric: Departmentally Developed Comprehensive Exam Rubric (Rev 1)

Analysis Questions and Analysis Answers

What specifically did your assessments show regarding proven strengths or progress you made on outcomes/objectives?

The M.S. in IS continues to have a strong assessment program. We regularly collect data, faculty get together to analyze data, and this summer, those recommendations were re-shared with faculty as they prepare courses for the fall. This program is being used as a model for our undergraduate programs.

What specifically did your assessments show regarding any outcomes/objectives that will require continued attention?

The process of data collection is cumbersome. Using comps to collect data is laborious. This has us seeking alternative means with which to collect assessment data.